DATE 04/06/2009

Columbia County Building Permit

This Permit Must Be Prominently Posted on Premises During Construction

PERMIT
000027729

APPLICANT CRAIG TIMBERLAKE PHONE 352 472-6850

ADDRESS 25370 NW 8TH PLACE NEWBERRY FL 32669

OWNER HOWARD & JUANITA SINGLETON PHONE 454-8285

ADDRESS 511 SE WATERLEAF DRIVE LAKE CITY FL 32024

CONTRACTOR CARL HELMS PHONE 352 860-2399

LOCATION OF PROPERTY 41/441S,TL 18, TR WATERLEAF, 2 1/2 MILES TO SITE
ON L.

TYPE DEVELOPMENT POOL ENCLOSURE ESTIMATED COST OF CONSTRUCTION 7800.00

HEATED FLOOR AREA _____ TOTAL AREA _____ HEIGHT ____ STORIES ____

FOUNDATION _____ WALLS _____ ROOF PITCH _____ FLOOR _____

LAND USE & ZONING A-3 MAX. HEIGHT _____

Minimum Set Back Requirments: STREET-FRONT 30.00 REAR 25.00 SIDE 25.00

NO. EX.D.U. 1 FLOOD ZONE N/A DEVELOPMENT PERMIT NO. _____

PARCEL ID 24-6S-17-09769-006 SUBDIVISION _____

LOT ____ BLOCK ____ PHASE ____ UNIT ____ TOTAL ACRES _____

		SCC056710		
Culvert Permit No.	Culvert Waiver	Contractor's License Number	Applicant/Owner/Contractor	
EXISTING	X09-087	CS	WR	N
Driveway Connection	Septic Tank Number	LU & Zoning checked by	Approved for Issuance	New Resident

COMMENTS: NOC ON FILE

Check # or Cash 1827

FOR BUILDING & ZONING DEPARTMENT ONLY

Temporary Power _____ date/app. by

Foundation _____ date/app. by

Monolithic _____ date/app. by (footer/Slab)

Under slab rough-in plumbing _____ date/app. by

Slab _____ date/app. by

Sheathing/Nailing _____ date/app. by

Framing _____ date/app. by

Insulation _____ date/app. by

Rough-in plumbing above slab and below wood floor _____ date/app. by

Electrical rough-in _____ date/app. by

Heat & Air Duct _____ date/app. by

Peri. beam (Lintel) _____ date/app. by

Pool _____ date/app. by

Permanent power _____ date/app. by

C.O. Final _____ date/app. by

Culvert _____ date/app. by

Pump pole _____ date/app. by

Utility Pole _____ date/app. by

M/H tie downs, blocking, electricity and plumbing _____ date/app. by

Reconnection _____ date/app. by

RV _____ date/app. by

Re-roof _____ date/app. by

BUILDING PERMIT FEE $ 40.00 CERTIFICATION FEE $ 0.00 SURCHARGE FEE $ 0.00

MISC. FEES $ 0.00 ZONING CERT. FEE $ ____ FIRE FEE $ 0.00 WASTE FEE $ ____

FLOOD DEVELOPMENT FEE $ ____ FLOOD ZONE FEE $ ____ CULVERT FEE $ ____ **TOTAL FEE** 40.00

INSPECTORS OFFICE _____ CLERKS OFFICE _____

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENTAL ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES, OR FEDERAL AGENCIES.

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."

EVERY PERMIT ISSUED SHALL BECOME INVALID UNLESS THE WORK AUTHORIZED BY SUCH PERMIT IS COMMENCED WITHIN 180 DAYS AFTER ITS ISSUANCE, OR IF THE WORK AUTHORIZED BY SUCH PERMIT IS SUSPENDED OR ABANDONED FOR A PERIOD OF 180 DAYS AFTER THE TIME THE WORK IS COMMENCED. A VALID PERMIT RECIEVES AN APPROVED INSPECTION EVERY 180 DAYS. WORK SHALL BE CONSIDERED NOT SUSPENDED, ABANDONED OR INVALID WHEN THE PERMIT HAS RECIEVED AN APPROVED INSPECTION WITHIN 180 DAYS OT THE PREVIOUS INSPECTION.

The Issuance of this Permit Does Not Waive Compliance by Permittee with Deed Restrictions.

Columbia County Building Permit Application

For Office Use Only Application # C903-62 Date Received 3/31/09 By CP Permit # 27729

Zoning Official cfs Date 4/3/09 Flood Zone N/A Land Use A-3 Zoning A-3

FEMA Map # _____ Elevation _____ MFE _____ River _____ Plans Examiner WD Date 4/2/09

Comments _____

✓ NOC ✓ EH ✓ Deed or PA ✓ Site Plan ☐ State Road Info ☐ Parent Parcel # _____

☐ Dev Permit # _____ ☐ In Floodway ☐ Letter of Auth. from Contractor ☐ F W Comp. letter

IMPACT FEES: EMS _____ Fire _____ Corr _____ Road/Code _____

School _____ = TOTAL _____

Septic Permit No. _____ Fax 352-472-6855

Name Authorized Person Signing Permit Craig Timberlake Phone 352 472-6850

Address 25370 NW 8th PL Newberry FL 32669

Owners Name Howard & Juanita Singleton Phone [redacted]

911 Address 511 SE Waterleaf Lake City FL

Contractors Name Carl R Helms Phone 352-860-2399 Cell

Address 25370 NW 8th PL Newberry FL 32669

Fee Simple Owner Name & Address N/A

Bonding Co. Name & Address N/A

Architect/Engineer Name & Address Lawrance Bennett P.O. Box 214368, S Daytona FL 32121

Mortgage Lenders Name & Address N/A

Circle the correct power company – FL Power & Light – Clay Elec. – Suwannee Valley Elec. – Progress Energy

Property ID Number 24-6S-17-09769-006 Estimated Cost of Construction $7,800.00

Subdivision Name _____ Lot ____ Block ____ Unit ____ Phase ____

Driving Directions 441 South T/L on CR 18 T/R on Waterleaf Dr. (Just Before I75 OverPass) House on Left #511

_____ Number of Existing Dwellings on Property ____

Construction of Pool Enclosure Total Acreage 14.63 Lot Size _____

Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive Total Building Height 14' Top of Roof

Actual Distance of Structure from Property Lines - Front 295.77' Side 236.06' Side 208' Rear 785.43'

Number of Stories 1 Heated Floor Area _____ Total Floor Area 1232.00 Roof Pitch ____

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction.

Left message w/ Craig 4/2/09

Columbia County Building Permit Application

TIME LIMITATIONS OF APPLICATION : An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

FLORIDA'S CONSTRUCTION LIEN LAW: Protect Yourself and Your Investment

According to Florida Law, those who work on your property or provide materials, and are not paid-in-full, have a right to enforce their claim for payment against your property. This claim is known as a construction lien. If your contractor fails to pay subcontractors or material suppliers or neglects to make other legally required payments, the people who are owed money may look to your property for payment, even if you have paid your contractor in full. This means if a lien is filed against your property, it could be sold against your will to pay for labor, materials or other services which your contractor may have failed to pay.

NOTICE OF RESPONSIBILITY TO BUILDING PERMITEE:

YOU ARE HEREBY NOTIFIED as the recipient of a building permit from Columbia County, Florida, you will be held responsible to the County for any damage to sidewalks and/or road curbs and gutters, concrete features and structures, together with damage to drainage facilities, removal of sod, major changes to lot grades that result in ponding of water, or other damage to roadway and other public infrastructure facilities caused by you or your contractor, subcontractors, agents or representatives in the construction and/or improvement of the building and lot for which this permit is issued. No certificate of occupancy will be issued until all corrective work to these public infrastructures and facilities has been corrected.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

OWNERS CERTIFICATION: I hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning. I further understand the above written responsibilities in Columbia County for obtaining this Building Permit.

Owners Signature

CONTRACTORS AFFIDAVIT: By my signature I understand and agree that I have informed and provided this written statement to the owner of all the above written responsibilities in Columbia County for obtaining this Building Permit.

Contractor's Signature (Permitee)

Contractor's License Number SCC056710
Columbia County
Competency Card Number_____

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 26 **day of** March **20** 09.

Personally known ✓ **or Produced Identification**_____

SEAL:

State of Florida Notary Signature (For the Contractor)

STATE OF FLORIDA, COUNTY OF COLUMBIA
I HEREBY CERTIFY, that the above and foregoing is a true copy of the original filed in this office.
P. DeWITT CASON, CLERK OF COURTS
By: Judith Moore
Deputy Clerk
Date: 3/31/09

CLERK CIRCUIT COURT COLUMBIA COUNTY FLORIDA

NOTICE OF COMMENCEMENT

Inst:200912005221 Date:3/31/2009 Time:8:11 AM
DC,P.DeWitt Cason,Columbia County Page 1 of 1 B:1170 P:602

This Instrument Prepared By:
Name: _____
Address: _____
Permit No: _____
Tax Folio No: R09769-006 24-65-17-09769-006
STATE OF: FL
COUNTY OF: Columbia

THE UNDERSIGNED HEREBY gives notice that improvement(s) will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

1. DESCRIPTION OF PROPERTY: Street Address: 511 SE Waterleaf Lake City FL
Legal Description: 24-65-17 9902/9900 14.6 Acres COM SE Cor of E½ of SW¼, RLH

2. GENERAL DESCRIPTION OF IMPROVEMENT(S): Screen Enclosure

3. OWNER INFORMATION: a.) Name: Howard & Juanita Singleton Address: 21612 NW 214th Terrace, High Springs FL 32643
b.) Interest in Property: owner / domicile
c.) Fee Simple Titleholder (if other than owner) Name: NA Address: _____

4. CONTRACTOR: a.) Name: Carl R Helms Address: 25370 NW 8th PL Newberry FL 32669 b.) Phone: 352-472-6850

5. SURETY: a.) Name: ~~Drill Engineering~~ Address: N/A
b.) Amount of bond $: _____ c.) Phone: _____

6. LENDER: a.) Name: N/A Address: N/A b.) Phone: N/A

7. Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by Section 713.13(1)(a) 7., Florida Statutes:
a.) Name: N/A Address: N/A b.) Phone: N/A

8. In addition to himself, Owner designates the following person(s) to receive a copy of Lienor's Notice as provided in Section 713.13(1)(b), Florida Statutes.
a.) Name: N/A Address: N/A b.) Phone: N/A

9. Expiration date of notice of commencement (the expiration date is one (1) year from the date of recording unless a different date is specified.) N/A

WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

Howard J. Singleton Howard J. Singleton Juanita Singleton Juanita Singleton
Signature of Owner or Owner's Authorized Officer/Director
Partner/Manager
Signatory's Title/ Office _____

The foregoing instrument was acknowledged before me this 22 day of November 2008 (year)
by Howard J Singleton, Juanita Singleton (name of person) as _____ (type of authority, e.g. officer, trustee, attorney in fact) for _____ (name of party on behalf of whom instrument was executed).

ELIZABETH A. CHUMLEY
MY COMMISSION # DD 660824
EXPIRES: June 3, 2011
Bonded Thru Notary Public Underwriters

Elizabeth A. Chumley
Signature of Notary Public – State of Florida
Print, Type, or Stamp Commissioned Name of Notary Public
Commission Number: _____
Personally Known ___ or Produced Identification ✓ DL

Verification Pursuant to Section 92.525, Florida Statutes
Under penalties of perjury, I declare that I have read the foregoing and that the facts stated in it are true to the best of my knowledge and belief.

Juanita R Singleton
Signature of Natural Person Signing Above

Columbia County Property Appraiser

DB Last Updated: 3/5/2009

2009 Preliminary Values

Tax Record | Property Card | Interactive GIS Map | Print

Parcel: 24-6S-17-09769-006

Search Result: 1 of 1

Owner & Property Info

Owner's Name	SINGLETON HOWARD J & JUANITA R		
Site Address			
Mailing Address	21612 NW 214 TER HIGH SPRINGS, FL 32643		
Use Desc. (code)	NO AG ACRE (009900)		
Neighborhood	24617.00	**Tax District**	3
UD Codes	MKTA02	**Market Area**	02
Total Land Area	14.600 ACRES		
Description	COMM SE COR OF E1/2 OF SW1/4, RUN N 635.39 FT FOR POB, RUN W 1098.91 FT, NW 39 DEG 285.66 FT, W 50.04 FT, N 302.35 FT, E 1179.20 FT TO W R/W I-75, SE 17 DEG ALONG R/W 530.31 FT, S 21.20 FT TO POB. ORB 894-131, CT 981-341, WD 999-1017, WD 1056-2704,		

GIS Aerial

Property & Assessment Values

Mkt Land Value	cnt: (1)	$74,898.00
Ag Land Value	cnt: (0)	$0.00
Building Value	cnt: (0)	$0.00
XFOB Value	cnt: (0)	$0.00
Total Appraised Value		$74,898.00

Just Value	$74,898.00
Class Value	$0.00
Assessed Value	$74,898.00
Exempt Value	$0.00
Total Taxable Value	$74,898.00

Sales History

Sale Date	Book/Page	Inst. Type	Sale Vlmp	Sale Qual	Sale RCode	Sale Price
8/31/2005	1056/2704	WD	V	Q		$140,000.00
10/28/2003	999/1017	WD	V	Q		$52,300.00
4/9/2003	981/341	CT	V	U	01	$100.00

Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
NONE						

Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
NONE						

Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value
009900	AC NON-AG (MKT)	14.600 AC	1.00/1.00/1.00/1.00	$5,130.00	$74,898.00

Columbia County Property Appraiser DB Last Updated: 3/5/2009

F A X

Timberlake Aluminum Construction
25370 NW 8th Place
Newberry, FL 32669
(352) 472-6850
(352) 472-6855 (fax)
timberlake2537@bellsouth.net
www.timberlakealuminum.com

To: JOHN KERCE
Fax number: 386-758-2160

From: CRAIG TIMBERLAKE

Date: **4-02-09**

Regarding: OK FROM LAWRENCE BENNETT

No. of Pages (including cover): 2

Comments:

I WILL BRING ORIGANAL IN WHEN I PICK UP PERMIT IF THAT IS OK.

Lawrence E. Bennett, P.E.

315 Herbert Street
Port Orange, FL 32129
386-767-4774 fax: 386-767-6556

January 1, 2009

TO ALL BUILDING DEPARTMENTS

Re: Master File Engineering
"ALUMINUM STRUCTURES DESIGN MANUAL"
2004 Florida Building Code with 2006 Supplements

Dear Building Official/Plans Examiner:

This is to certify that the following contractor/company is hereby authorized to use my "ALUMINUM STRUCTURES DESIGN MANUAL" during the year 2009.

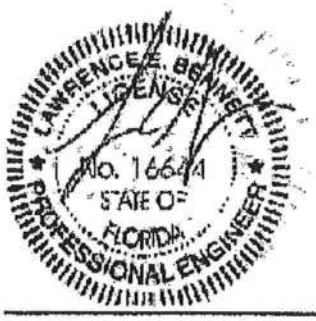
Authorization is on a January to January basis regardless of the edition of the manual. This authorization also applies to contractor master file drawings, "ONE PERMIT ONLY" drawings or any "site specific" drawings that I may furnish the contractor.

The following contractor/company is hereby added to my 2009 MASTERFILE LIST:

Carl Helms
Timberlake Aluminum Construction
25370 NW 8th Pl
Newberry, FL 32669
SCC056710

Should you have any questions, please contact me at your convenience.

Sincerely,

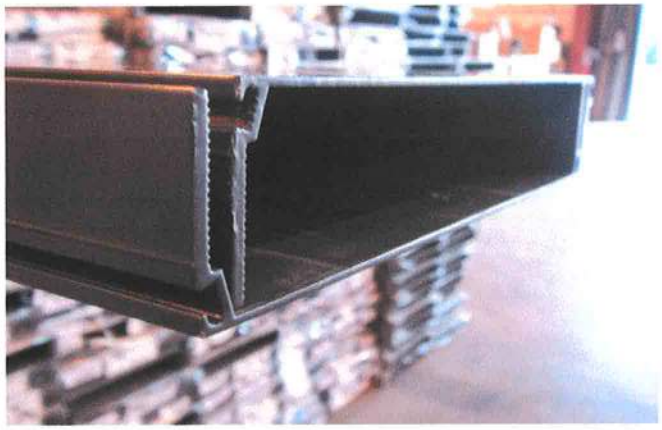


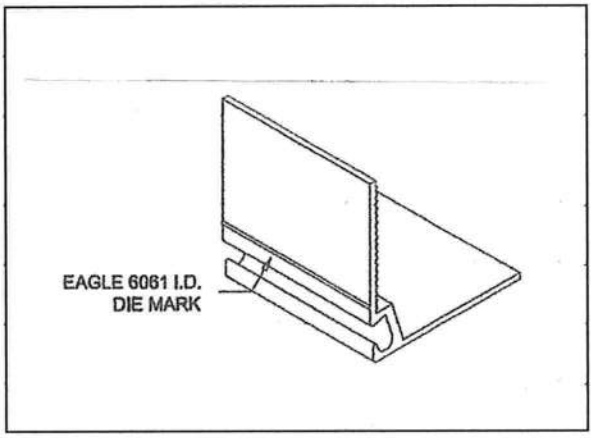
Lawrence E. Bennett, P.E. #16644

EAGLE METAL DISTRIBUTORS, INC.

❖ THE FREEDOM OF CHOICE ❖

EAGLE 6061™ ALLOY CERTIFICATION





Company Name: TIMBERLAKE ALUMINUM Date: 03-26-09

Eagle Invoice # 30805
Job Name SINGLETON
Address: 511 SE WATERLEAF
LAKE CITY FL.

This is to certify that the above company has purchased 6061 aluminum alloy material from our company for the construction of screen enclosures. The above pictures illustrate our 'raised' external identification mark (EAGLE 6061™) and its location next to the spline groove, to signify our 6061 alloy extrusions. **Certification not valid unless die mark is verified.** Eagle Metal Distributors certifies this based on specifications and validation provided by our extrusion suppliers, which states 6061 alloy was ordered and produced on all such designated profiles. Certification not valid without seal and signature from Eagle Metal Distributors, Inc. It is ultimately the purchaser's/contractors responsibility to ensure the proper alloy is used in conjunction with the engineering selected for construction.

This certification should be displayed on site for final inspection.

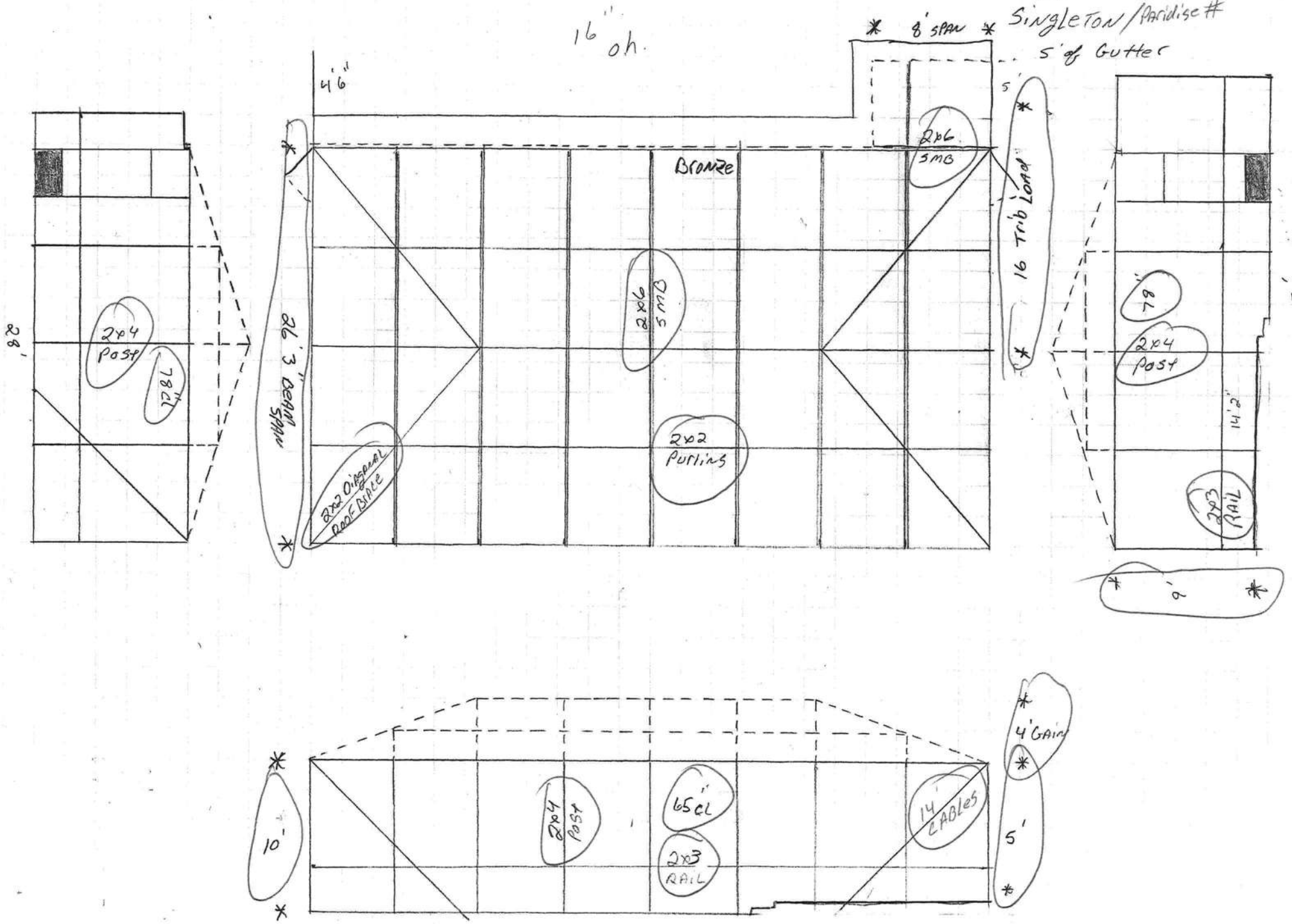
Inspector can look for identification mark on all extrusion components as specified above to validate the use of 6061 engineering.

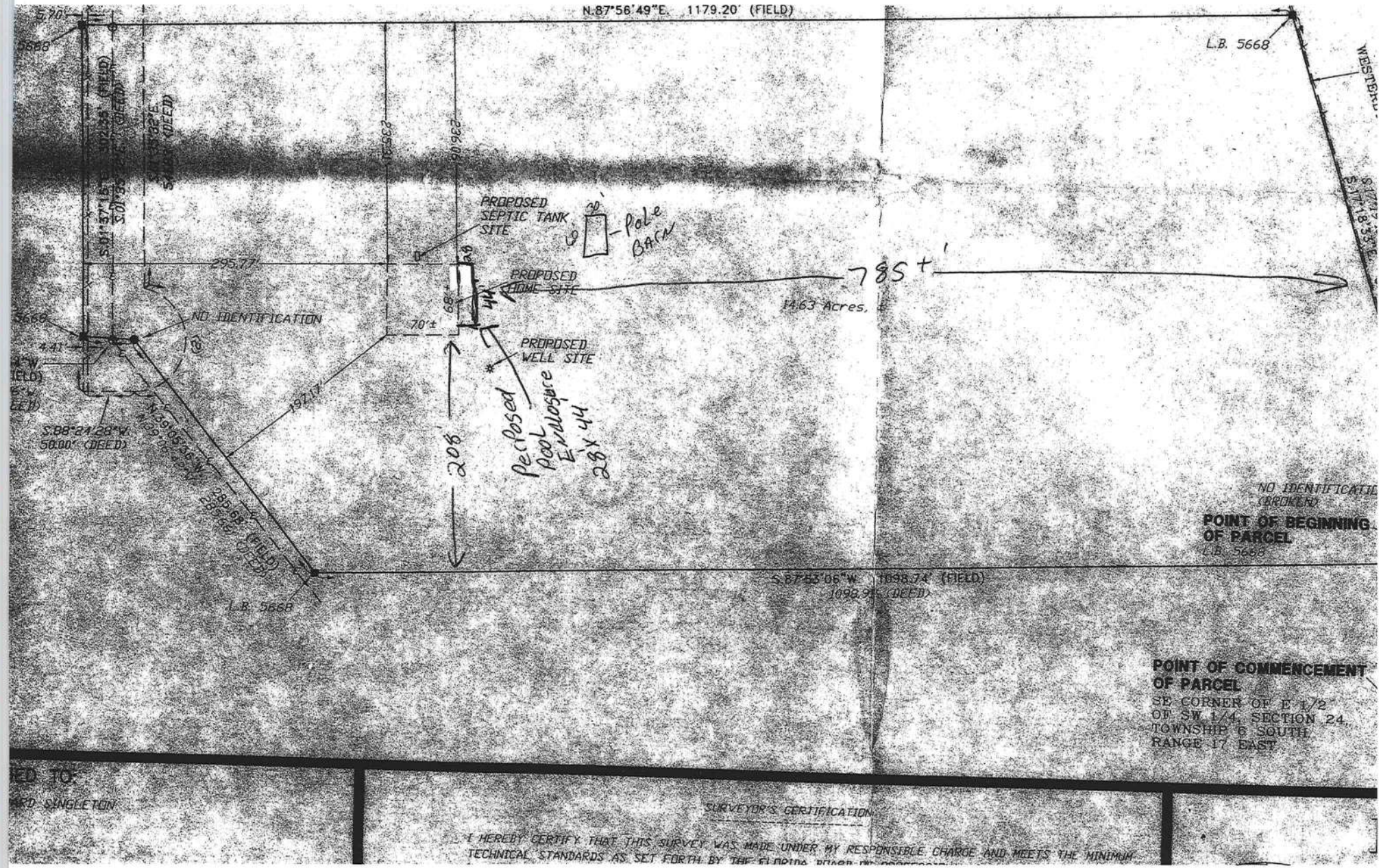
Signature:
Eagle Rep. Gregory L Wilson

Seal:

603-B W. LANDSTREET ROAD, ORLANDO, FL 32824 • TEL: 407-367-0688 • TOLL FREE: 866-609-5334 FAX: 407-367-0684

SINGLE WATERLEAF
LAKE City FL
SINGLETON / Paridise #




N.87°56'49"E. 1179.20' (FIELD)
L.B. 5668
PROPOSED SEPTIC TANK SITE
30'
Pole BARN
PROPOSED HOME SITE
785 +/-
14.63 Acres, ±
295.77'
NO IDENTIFICATION
70'±
PROPOSED WELL SITE
Proposed Pool Enclosure 28' x 44'
208'
197.17'
S.88°24'28"W. 50.00' (DEED)
255.68' (FIELD) 255.69' (DEED)
L.B. 5668
S.87°53'06"W. 1098.74' (FIELD)
1098.91' (DEED)
NO IDENTIFICATION (BROKEN)
POINT OF BEGINNING OF PARCEL
L.B. 5668
POINT OF COMMENCEMENT OF PARCEL
SE CORNER OF E 1/2 OF SW 1/4, SECTION 24, TOWNSHIP 6 SOUTH RANGE 17 EAST
SURVEYOR'S CERTIFICATION
I HEREBY CERTIFY THAT THIS SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE MINIMUM

Design Check List for Pool Enclosures

I. Design Statement: (EAGLE ALUMINUM 6061 T-6 FRAME MEMBERS)

These plans have been designed in accordance with the Aluminum Structures Design Manual by Lawrence E. Bennett and are in compliance with the 2004 Florida Building Code Edition with 2006 Supplements, Chapter 20, ASM35 and The 2005 Aluminum Design Manual Part I-A & II-A; Exposure 'B'___ or 'C'___ or 'D'___; Importance Factor 0.87 for 100 MPH and 0.77 for 110 MPH and higher; Negative I.P.C. 0.00; ___ MPH Wind Zone for 3 second wind gust; Basic Wind Pressure ___; Design pressures are ___ PSF for roofs & ___ PSF for walls. (see page 1 for wind loads and design pressures) A 300 PLF point load is also considered for screen roof members.

Notes: Wind velocity zones and exposure category is determined by local code. Design pressures and conversion multipliers are on page 1.

II. Host Structure Adequacy Statement:

I have inspected and verify that the host structure is in good repair and attachments made to the structure will be solid.

CSAig Timber Latke — Phone: 472-6850
Contractor / Authorized Rep* Name (please print)

Contractor / Authorized Rep* Signature — Date: 3-27-09

Singl Ton / 511 SE WATERLEAF LAKE City FL
Job Name & Address

Note: If the total of beam span & upright height exceeds 50' or upright height exceeds 16', site specific engineering is required.

III. Building Permit Application Package contains the following:

	Yes	No
A. Project name & address on plans	✓	
B. Site plan or survey with enclosure location	✓	
C. Contractor's / Designer's name, address, phone number, & signature on plans	✓	
D. Site exposure form completed	✓	
E. Enclosure layout drawing @ 1/8" or 1/10" scale with the following:	✓	
1. Plan view with host structure, enclosure length, projection from host structure, and all dimensions	✓	
2. Front and side elevation views with all dimensions & heights	✓	
Note: All mansard wall drawings shall include mansard panel at the top of the wall.		
3. Beam location (show in plan & elevation view) & size (Table 1.1 & 1.6)	✓	

Roof frame member allowable span conversions from 120 MPH wind zone, "B" Exposure to _____ MPH wind zone and / or __"C" or __"D" Exposure for load width of _____:

Note: Conversion factors do not apply to members subject to point load (P).

Look up span in appropriate 120 MPH span table and apply the following formula:

Span @ 120 MPH ——— (b or d) x ____ (b or d) x ____ (b or d) = ——— Required Converted Span / Height

Wind Zone Multiplier (see page 1) ——— Exposure Multiplier (see page 1)

4. Upright location (show in plan & elevation view) & size (Table 1.3 E & 1.6 E)	✓	
5. Chair rail & girt size, length, & spacing (Table 1.4 E)	✓	
6. Eave rail size, length, spacing and stitching of (Table 1.2 E)	✓	

* Must have attended Engineer's Continuing Education Class within the past two years.

Wall frame member allowable span conversions from 120 MPH wind zone, "B" Exposure to _____ MPH wind zone and / or __"C" or __"D" Exposure for load width of _____:

Look up span in appropriate 120 MPH span table and apply the following formula:

Span / Height @ 120 MPH or ___ MPH ——— (b or d) x ____ (b or d) x ____ (b or d) = ——— Required Converted Span / Height

Wind Zone Multiplier ** ——— Exposure Multiplier (see page 1)

	Yes	No
7. Enclosure roof diagonal bracing in plan view	✓	
8. Knee braces length, location, & size (Table 1.7 E)	✓	
9. Wall cables or K-bracing sizes shown in wall views	✓	

IV. Highlight details from the Aluminum Structures Design Manual:

A. Beam & purlin tables with size, thickness, spacing, & spans / lengths (Tables 1.1 E & 1.2 E or 1.9.1 E & 1.9.2 E)	✓	
B. Upright & girt tables with size, thickness, spacing, & spans / lengths (Tables 1.3 E & 1.4 E)	✓	
C. Table 1.6 with beam & upright combination	✓	
D. Connection details to be use such as:		
1. Beam to upright	✓	
2. Beam to wall	✓	
3. Beam to beam	✓	
4. Chair rail, purlins, & knee braces	✓	
5. Extruded gutter connections	✓	
6. Angle to deck and / or sole plate	✓	

	Yes	No
7. Anchors go through pavers into concrete	✓	
8. Minimum footing and / or knee wall details	✓	
9. Cable or K- brace details Section 1	✓	

Wall area calculations for cables:
W = wall width, H = wall height, R = rise
W1 = width @ top of mansard, W2 = width @ top of wall

E. Select footing from examples in manual.

Example 1: Flat Roof

Front wall @ eave: ____ft. x ____ft. = ____ft.² @ 100% = ____ ft.²
W H a

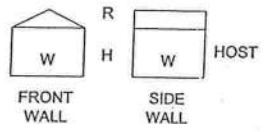
Largest side wall: ____ft. x ____ft. = ____ft.² @ 50% = ____ ft.²
W H b

TOTAL = ____ ft.²

Total area / (233 ft.² / cable for 3/32") = _____cable pairs
or
Total area / (445 ft.² / cable for 1/8") = _____cable pairs

Side wall cable calculation: ____ft.² @ 100% = ____ ft.²
b

Side wall area / (233 ft.² / cable for 3/32") = _____cable(s)
or
Side wall area / (445 ft.² / cable for 1/8") = _____cable(s)



Example 2: Gable Roof

Front wall @ eave: ____ft. x ____ft. = ____ft.² @ 100% = ____ ft.²
W H a

Front gable rise: ____ft. x 1/2(____ft.) = ____ft.² @ 100% = ____ ft.²
R W b

Largest side wall: ____ft. x ____ = ____ft.² @ 50% = ____ ft.²
W H c

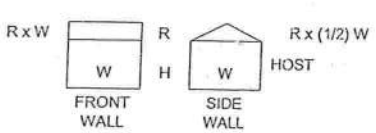
Largest side gable rise: ____ft. x ____ft. = ____ft.² @ 50% = ____ ft.²
R W d

TOTAL = ____ ft.²

Total area / (233 ft.² / cable for 3/32") = _____cable pairs
or
Total area / (445 ft.² / cable for 1/8") = _____cable pairs

Side wall cable calculation: ____ft.² + ____ft.² = ____ft.² @ 100% = ____ ft.²
c d

Side wall area / (233 ft.² / cable for 3/32") = _____cable(s)
or
Side wall area / (445 ft.² / cable for 1/8") = _____cable(s)



Example 3: Transverse Gable Roof

Front wall @ eave: 44 ft. x 10 ft. = 440 ft.² @ 100% = 440 ft.²
W H a

Front gable rise: 4 ft. x 44 ft. = 176 ft.² @ 100% = 176 ft.²
R W b

Largest side wall: 33 ft. x 10 = 330 ft.² @ 50% = 165 ft.²
W H c

Largest side gable rise: 4 ft. x 1/2 (33 ft.) = 66 ft.² @ 50% = 33 ft.²
R W d

TOTAL = ____ ft.²

Total area / (233 ft.² / cable for 3/32") = _____cable pairs
or
Total area / (445 ft.² / cable for 1/8") = 2 cable pairs

Side wall cable calculation: 330 ft.² + 66 ft.² = 396 ft.² @ 100% = 396 ft.²
c d

Side wall area / (233 ft.² / cable for 3/32") = _____cable(s)
or
Side wall area / (445 ft.² / cable for 1/8") = 0 cable(s)

Example 4: Mansard Roof

Front wall @ eave: ____ft. x ____ft. = ____ft.² @ 100% = ____ ft.²
W H a

Front mansard rise: ____ft. x 1/2(____ft. + ____ft.) = ____ft.² @ 100% = ____ ft.²
R W1 W2 b

Largest side wall: ____ft. x ____ = ____ft.² @ 50% = ____ ft.²
W H c

Largest side mansard rise: ____ft. x 1/2(____ft. + ____ft.) = ____ft.² @ 50% = ____ ft.²
R W1 W2 d

TOTAL = ____ ft.²

Total area / (233 ft.² / cable for 3/32") = _____cable pairs
or
Total area / (445 ft.² / cable for 1/8") = _____cable pairs

Side wall cable calculation: ____ft.² + ____ft.² = ____ft.² @ 100% = ____ ft.²
c d

Side wall area / (233 ft.² / cable for 3/32") = _____cable(s)
or
Side wall area / (445 ft.² / cable for 1/8") = _____cable(s)

Example 5: Dome Roof

Front dome wall @ eave: ____ft. x ____ft. = ____ft. @ 100% = ____ ft.²
W H a

Front dome rise: ____ft. x 1/2(____ft.) = ____ft.² @ 100% = ____ ft.²
R W b

Largest side wall: ____ft. x ____ = ____ft.² @ 50% = ____ ft.²
W H c

Largest side dome rise: ____ft. x ____ft. = ____ft.² @ 50% = ____ ft.²
R W d

TOTAL = ____ ft.²

Total area / (233 ft.² / cable for 3/32") = _____cable pairs
or
Total area / (445 ft.² / cable for 1/8") = _____cable pairs

Side wall cable calculation: ____ft.² + ____ft.² = ____ft.² @ 100% = ____ ft.²
c d

Side wall area / (233 ft.² / cable for 3/32") = _____cable(s)
or
Side wall area / (445 ft.² / cable for 1/8") = _____cable(s)

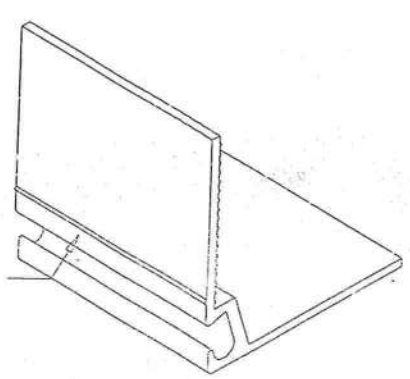
EAGLE 6061 ALLOY IDENTIFIER™ INSTRUCTIONS FOR PERMIT PURPOSES

To: Plans Examiners and Inspectors,

These identification instructions are provided to contractors for permit purposes. The pictures below illustrate our unique "raised" external identification mark (Eagle 6061™) and its location next to the spline groove, to signify our 6061 alloy extrusions. It is ultimately the purchaser's / contractor's responsibility to ensure that the proper alloy is used in conjunction with the engineering selected for construction. We are providing this identification mark to simplify identification when using our 6061 Alloy products.

A separate signed and sealed certification letter from Eagle Metals will be provided once the metal is purchased. This should be displayed on site for review at final inspection.

The inspector should look for the identification mark as specified below to validate the use of 6061 engineering.



11-2-2007

EAGLE METAL DISTRIBUTORS, INC.
THE FREEDOM OF CHOICE
601-B W. LANDSTREET ROAD, ORLANDO, FL 32824
• TEL: 407-367-0688 • FAX: 407-367-0684

ALUMINUM STRUCTURES DESIGN MANUAL
SCREEN ENCLOSURES
INSPECTION GUIDE / DESIGN CHECK LIST
2004 FBC W/ 2006 SUPPLEMENTS
2006 EDITION

Lawrence E. Bennett, P.E. FL # 16644
CIVIL & STRUCTURAL ENGINEERING
P.O. Box 214368, South Daytona, Fl 32121
Telephone #: (386) 767-4774 Fax #: (386) 767-6556
Email: lebpe@bellsouth.net

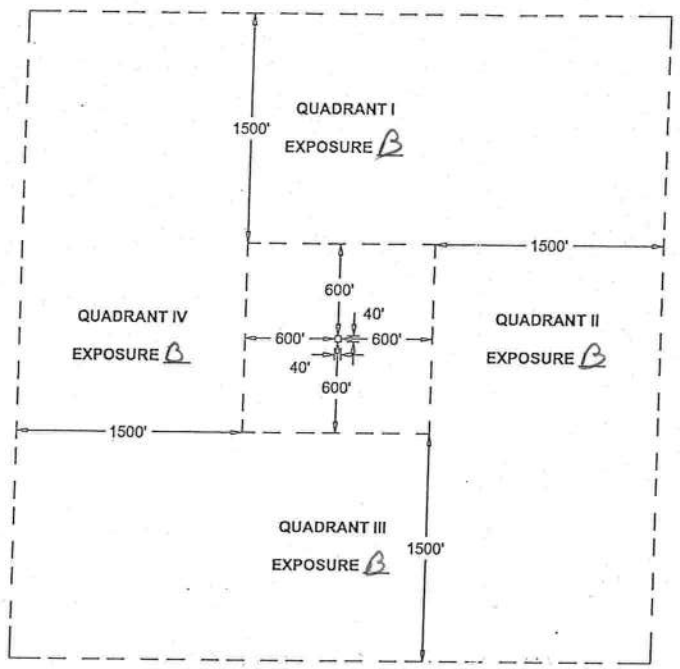
SEAL

SHEET 1 OF 2

Inspection Guide For Pool Enclosures

	Yes	No
1. Check the building permit for the following:		
a. Permit card & address	___	___
b. Approved drawings and addendums as required	___	___
c. Plot plan or survey	___	___
d. Notice of commencement	___	___
2. Check the approved site specific drawings or shop drawings against the "AS BUILT" structure for:	Yes	No
a. Structures length, projection, plan & height as shown on the plans	___	___
b. Beam size, span, spacing & stitching screws	___	___
c. Purlin size, span & spacing	___	___
d. Upright size, height, spacing & stitching screws	___	___
e. Chair rail size, length & spacing	___	___
f. Eve rail size, length, spacing & stitching of 1" x 2" to 2" x 2"	___	___
g. Enclosure roof diagonal bracing is installed snug	___	___
h. Wall cables or 'K' bracing are installed snug	___	___
i. Knee braces are properly installed	___	___
3. Check load bearing uprights for the following:	Yes	No
a. Angle bracket size & thickness	___	___
b. Correct number, size & spacing of fasteners to upright	___	___
c. Correct number, size & spacing of fasteners of angle to deck and sole plate	___	___
d. Upright is anchored to deck through brick pavers then anchors shall go through pavers into concrete	___	___
4. Check the load bearing beam to upright for:	Yes	No
a. Upright to beam connection and / or splices have correct number & spacing of screws	___	___
b. Overlap beam to upright or gusset plate	___	___
c. If angle brackets are used in framing check for correct thickness and size & number of fasteners	___	___
5. Check load bearing beam to host structure and / or gutter for:	Yes	No
a. Receiver bracket, angle or receiving channel size & thickness	___	___
b. Size, number & spacing of anchors of beam to receiver	___	___
c. Size, number & spacing of anchors of receiver to host structure of gutter	___	___
d. Correct anchoring of gutters to host structure	___	___
6. Check the wall cables:	Yes	No
a. Location & number	___	___
b. Top bracket size and fasteners	___	___
c. Eye bolts are welded	___	___
d. Bottom strap to concrete connection	___	___
7. Check wall 'K' bracing (if required):	Yes	No
a. Location & size	___	___
b. Angle, gusset or clip size & number	___	___
c. Number & size of fasteners	___	___
8. Check electrical ground:	Yes	No
a. Properly completed	___	___
b. Angle, gusset or clip size & number	___	___
c. Number & size of fasteners	___	___
9. Check the doors on pool enclosures:	Yes	No
a. Door handle @ 54" from the deck	___	___

SITE EXPOSURE EVALUATION FORM



NOTE: ZONES ARE MEASURED FROM STRUCTURE OUTWARD

SITE
SCALE: 1" = 1200'

USING THE FOLLOWING CRITERIA, EVALUATE EACH QUADRANT AND MARK IT AS 'B', 'C', OR 'D' EXPOSURE. 'C' OR 'D' EXPOSURE IN ANY QUADRANT MAKE THE SITE THAT EXPOSURE.

EXPOSURE C:
1. OPEN TERRAIN FOR MORE THAN 1,500 FEET IN ANY QUADRANT.
2. ANY 'C' EXPOSURE FOR GREATER THAN 600 FEET IN ANY QUADRANT.
3. NO SHORT TERM CHANGES IN 'B', 2 YEARS BEFORE SITE EVALUATION AND BUILD OUT WITHIN 3 YEARS, SITE WILL BE 'B'.
4. FLAT, OPEN COUNTRY, GRASSLANDS, PONDS AND OCEAN OR SHORELINES IN ANY QUADRANT FOR GREATER THAN 1,500 FEET.

EXPOSURE D: FLAT, UNOBSTRUCTED AREAS THAT ARE 1,500 FT INLAND FROM THE SHORE LINE AND ARE EXPOSED TO WIND FLOWING OVER WATER FOR A DISTANCE OF AT LEAST 1 MILE.

SITE IS EXPOSURE: C EVALUATED BY: Craig Timberlake DATE: 3-27-09

SIGNATURE: Craig Timberlake LICENSE #: SCL056710

EAGLE 6061 ALLOY IDENTIFIER™ INSTRUCTIONS FOR PERMIT PURPOSES

To: Plans Examiners and Inspectors,

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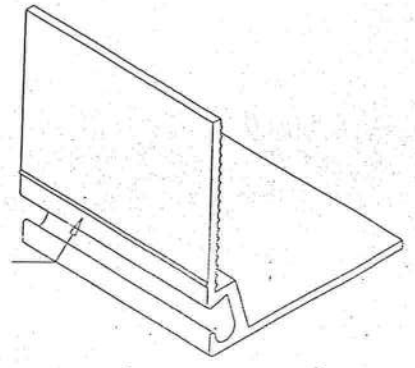

10-31-2007

EAGLE METAL DISTRIBUTORS, INC.
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603-B W. LANDSTREET ROAD, ORLANDO, FL 32824
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AUTHORIZED MASTER FILE CONTRACTOR: DO NOT REQUIRE RAISED SEAL COPIES - ALL OTHER USERS REQUIRE RAISED SEAL COPIES
IF USING THESE EAGLE 6061 TABLES, PLEASE REFER TO INSTRUCTIONS ON IDENTIFICATION AND CERTIFICATION OF EAGLE METALS 6061 ALLOY.

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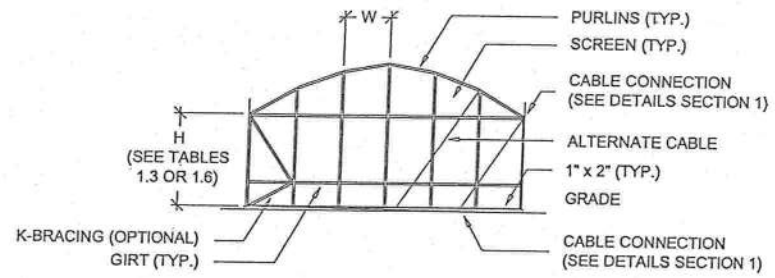
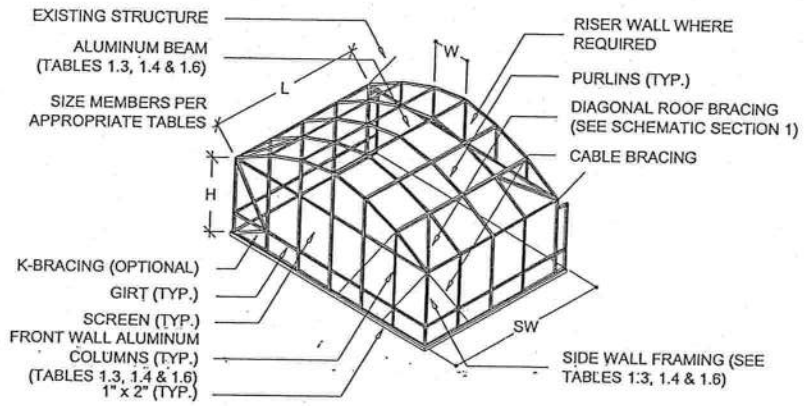
SHEET 2 OF 2



TYPICAL DOME ROOF - FRONT WALL ELEVATION

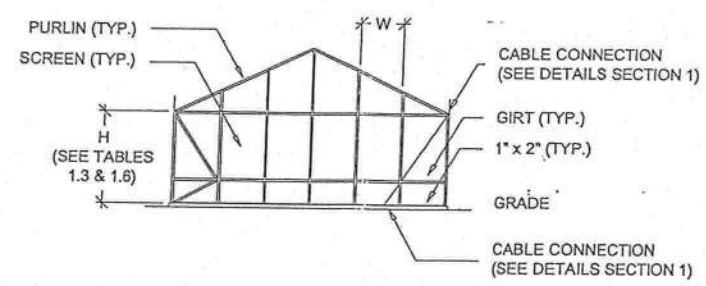
SCALE: N.T.S.



TYPICAL DOME ROOF - ISOMETRIC

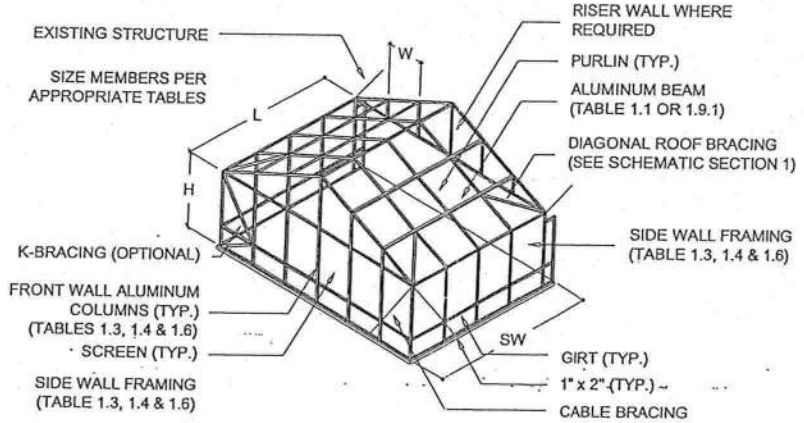
SCALE: N.T.S.

CONNECTION DETAILS AND NOTES ARE FOUND IN THE SUBSEQUENT PAGES.



TYPICAL TRANSVERSE GABLE ROOF - FRONT WALL ELEVATION

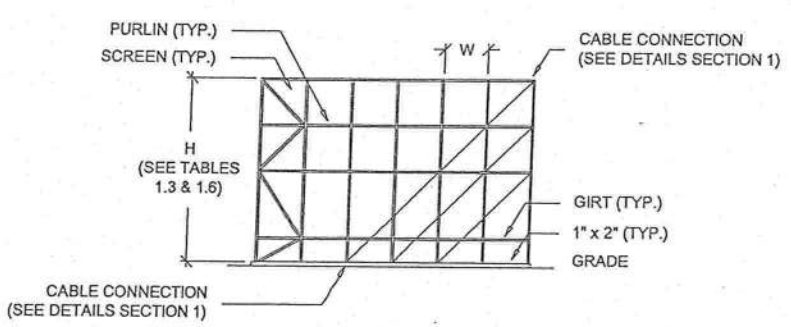
SCALE: N.T.S.



TYPICAL TRANSVERSE STACKED GABLE ROOF - ISOMETRIC

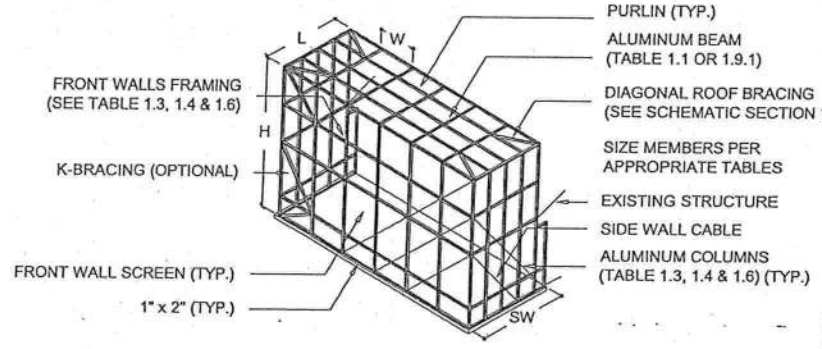
SCALE: N.T.S.

CONNECTION DETAILS AND NOTES ARE FOUND IN THE SUBSEQUENT PAGES



TYPICAL TWO STORY POOL ENCLOSURE - FRONT WALL ELEVATION (ALL ROOF TYPES)

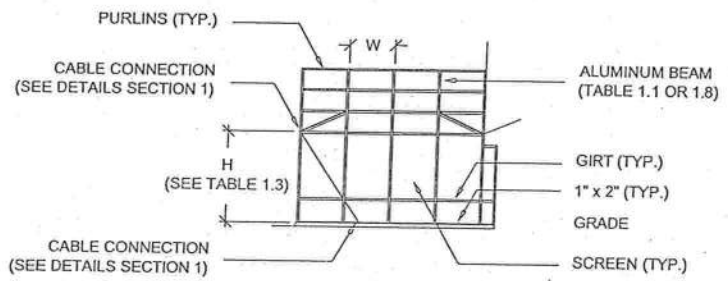
SCALE: N.T.S.



TYPICAL TWO STORY POOL ENCLOSURE - ISOMETRIC (ALL ROOF TYPES)

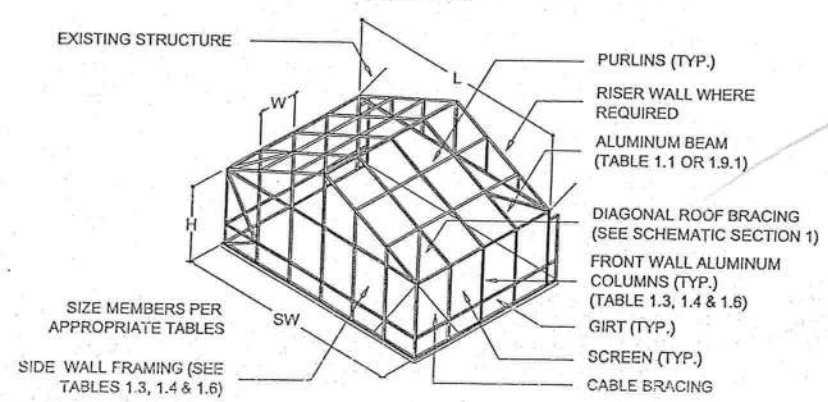
SCALE: N.T.S.

CONNECTION DETAILS AND NOTES ARE FOUND IN THE SUBSEQUENT PAGES



TYPICAL GABLE ROOF - FRONT WALL ELEVATION

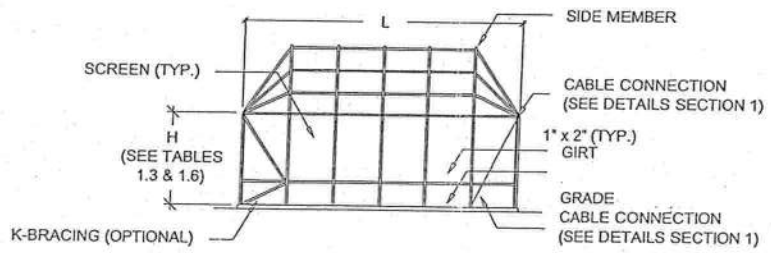
SCALE: N.T.S.



TYPICAL GABLE ROOF - ISOMETRIC

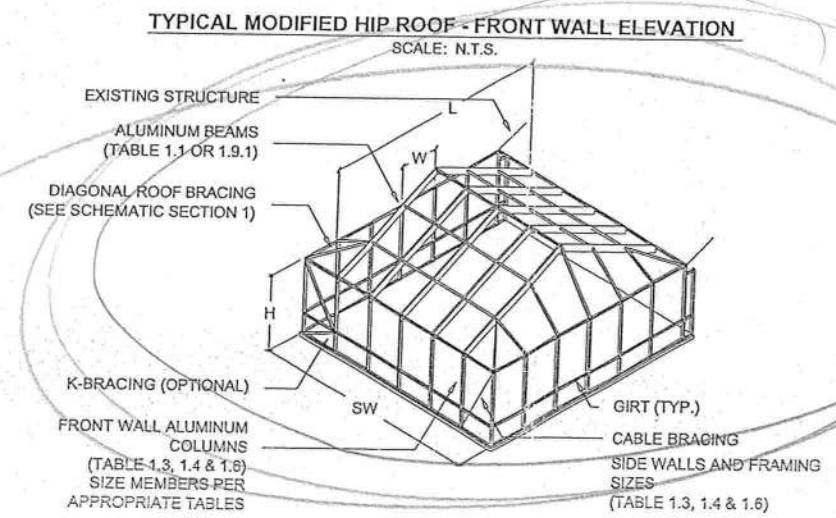
SCALE: N.T.S.

CONNECTION DETAILS AND NOTES ARE FOUND IN THE SUBSEQUENT PAGES



TYPICAL MODIFIED HIP ROOF - FRONT WALL ELEVATION

SCALE: N.T.S.



TYPICAL MODIFIED HIP ROOF - ISOMETRIC

SCALE: N.T.S.

10-31-2007

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ALUMINUM STRUCTURES DESIGN MANUAL
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SHEET 2 OF 18

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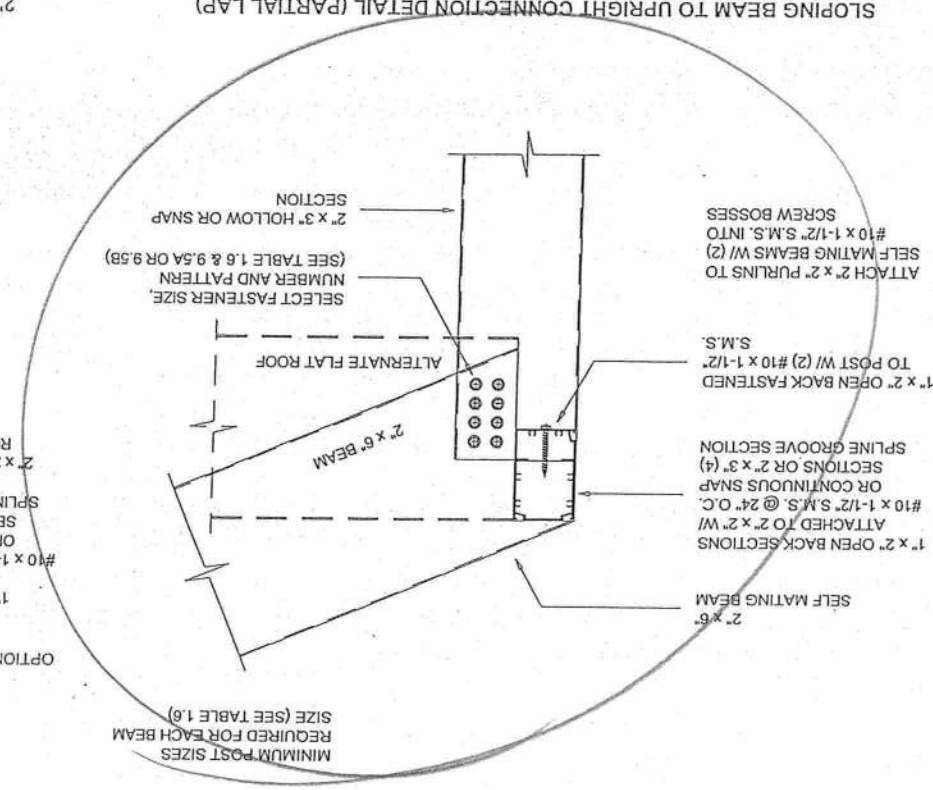
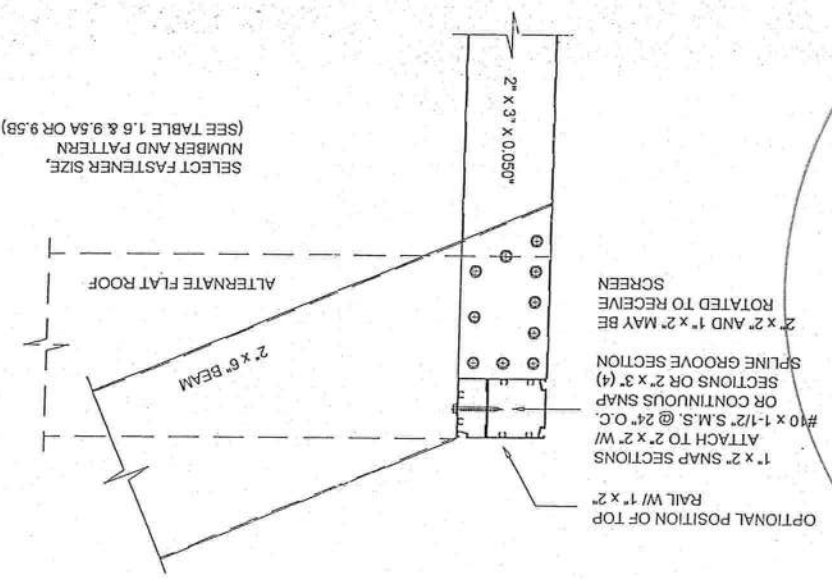
SHEET 3 OF 18

2-14-2007

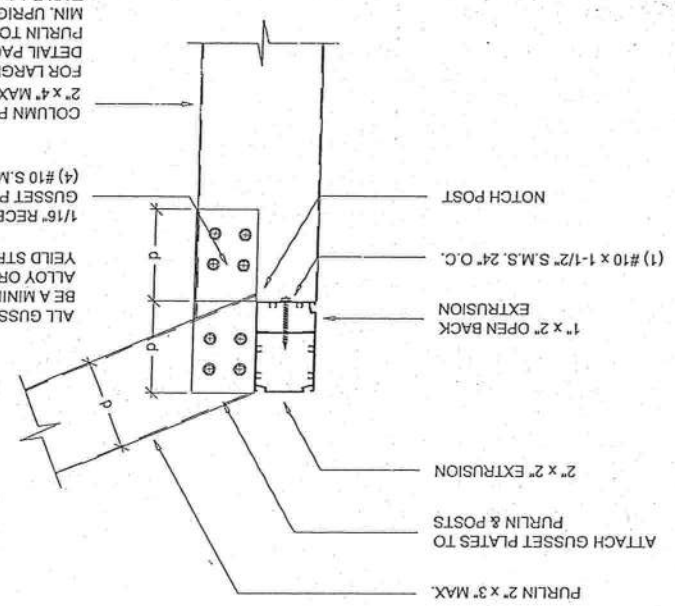
SLOPING BEAM TO UPRIGHT CONNECTION DETAIL (PARTIAL LAP)
SCALE: 2" = 1'-0"



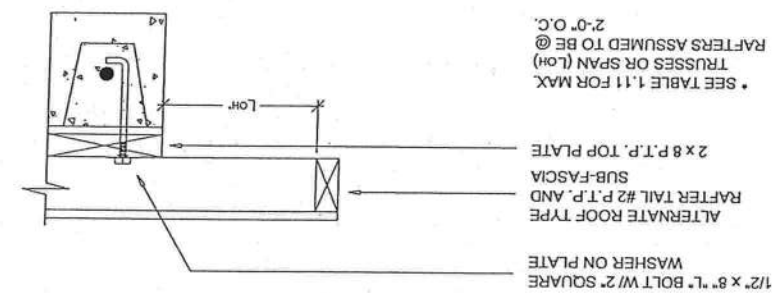
2" x 6" BEAM TO 2" x 3" UPRIGHT CONNECTION DETAIL (FULL LAP)
SCALE: 2" = 1'-0"



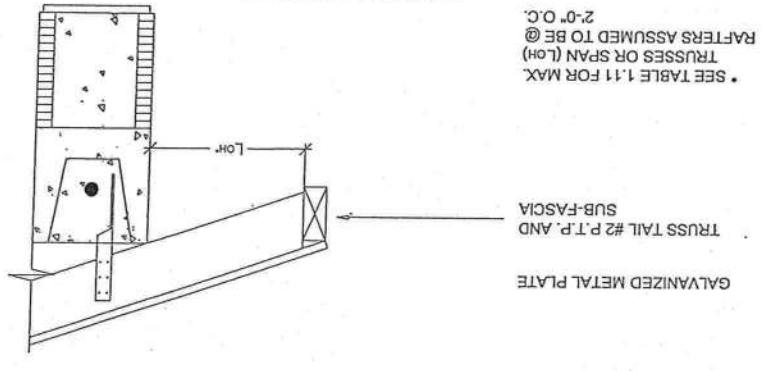
SIDE WALL TO PURLIN DETAIL
SCALE: 2" = 1'-0"



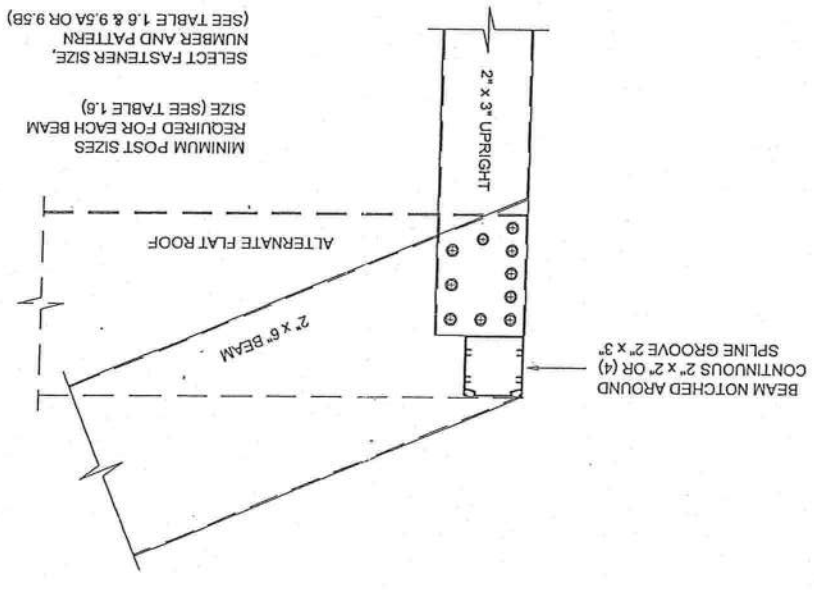
ALTERNATE TOP PLATE TRUSS / RAFTER TAIL ASSEMBLY
SCALE: 1" = 1'-0"



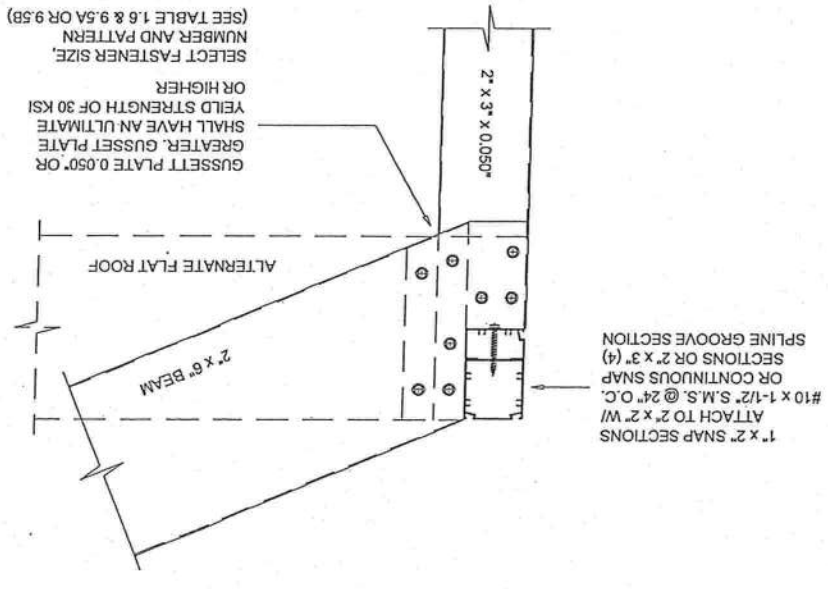
TRUSS / RAFTER TAIL
SCALE: 1" = 1'-0"

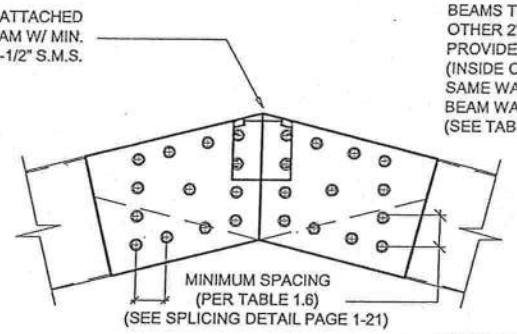


2" x 6" BEAM TO 2" x 3" UPRIGHT CONNECTION DETAIL (FULL LAP)
SCALE: 2" = 1'-0"

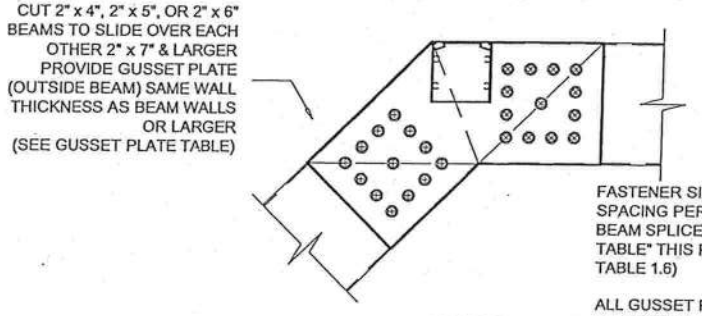


2" x 6" BEAM TO 2" x 3" UPRIGHT CONNECTION DETAIL (FULL LAP)
WITH GUSSET PLATE DETAIL (FULL LAP)
SCALE: 2" = 1'-0"

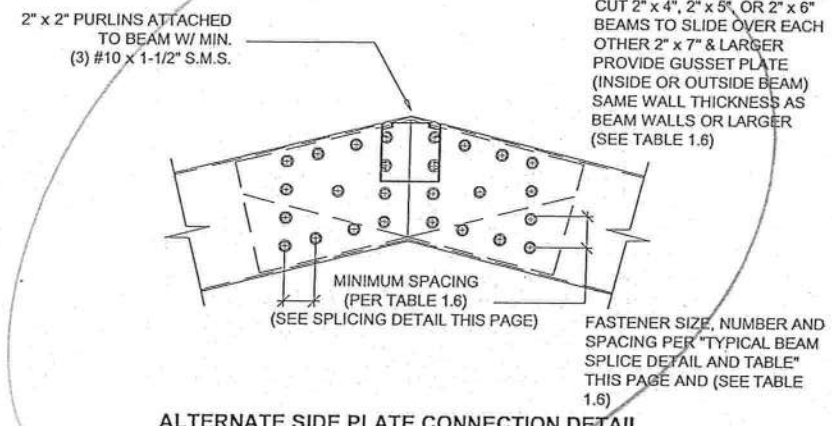




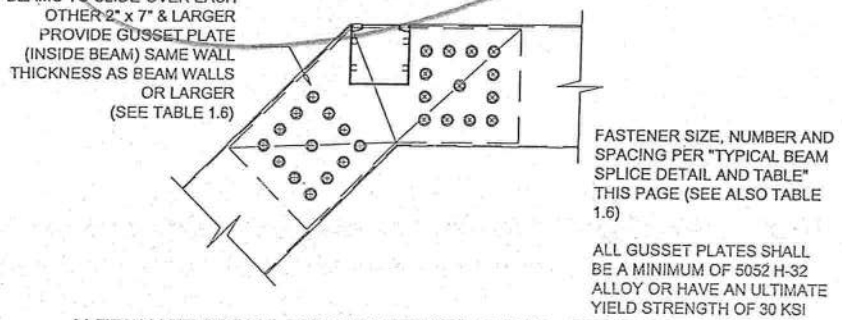
TYPICAL SIDE PLATE CONNECTION DETAIL
SCALE: 2" = 1'-0"



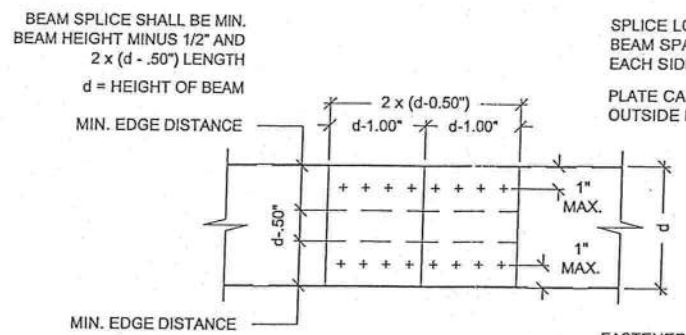
TYPICAL SIDE PLATE CONNECTION DETAIL - MANSARD ROOF
SCALE: 2" = 1'-0"



ALTERNATE SIDE PLATE CONNECTION DETAIL
GUSSET PLATE MOUNTED INTERNALLY
SCALE: 2" = 1'-0"



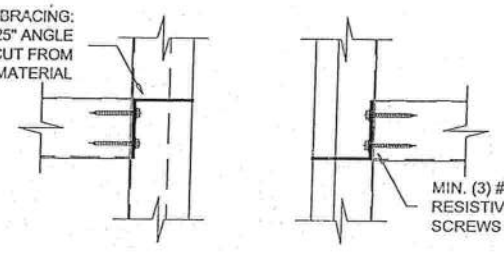
ALTERNATE SIDE PLATE CONNECTION DETAIL - MANSARD ROOF
GUSSET PLATE MOUNTED INTERNALLY
SCALE: 2" = 1'-0"



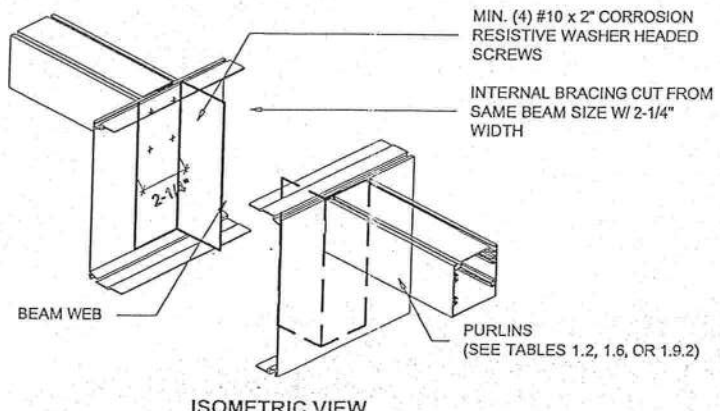
Screw Size	ds (in.)	Minimum Distance and Spacing of Screws* Edge to Center 2ds (in.)	Center to Center 2-1/2ds (in.)	Gusset Plate Beam Size	Thickness (in.)
#8	0.16	3/8	7/16	2" x 7" x 0.055" x 0.120"**	1/16 = 0.063
#10	0.19	3/8	1/2	2" x 8" x 0.072" x 0.224"	1/8 = 0.125
#12	0.21	7/16	9/16	2" x 9" x 0.072" x 0.224"	1/8 = 0.125
#14 or 1/4"	0.25	1/2	5/8	2" x 9" x 0.082" x 0.306"	1/8 = 0.125
5/16"	0.31	5/8	3/4	2" x 10" x 0.092" x 0.369"	1/4 = 0.25

* refers to each side of splice
** use for 2" x 4" and 2" x 6" also
Note:
1. All gusset plates shall be minimum 5052 H-32 Alloy or have a minimum yield of 30 ksi.

TYPICAL BEAM SPLICE DETAIL
SCALE: 2" = 1'-0"



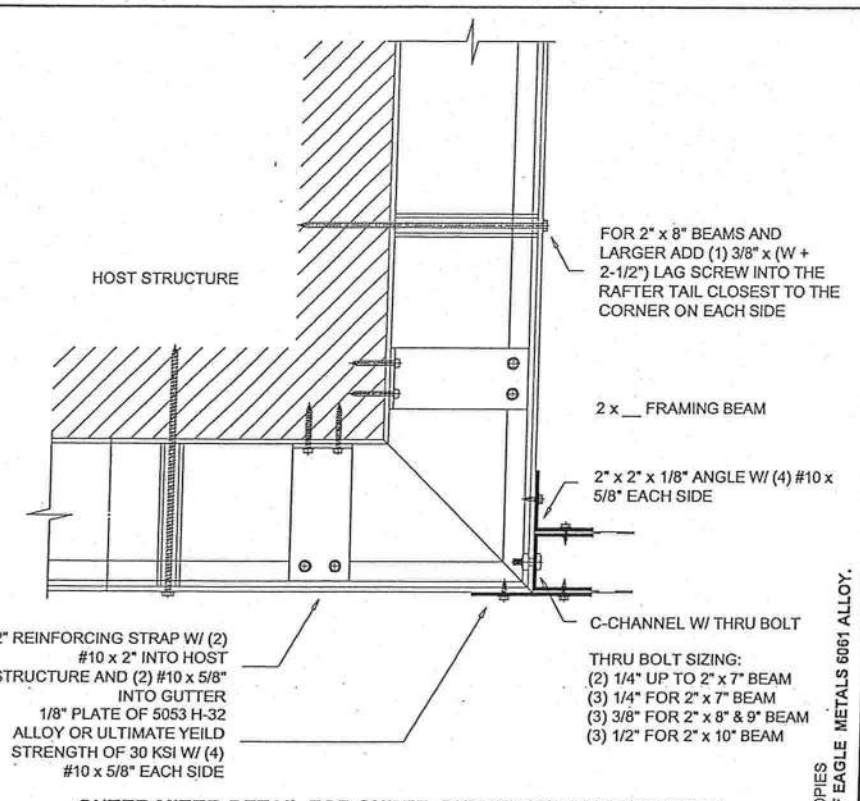
PLAN VIEW
SCALE: 2" = 1'-0"



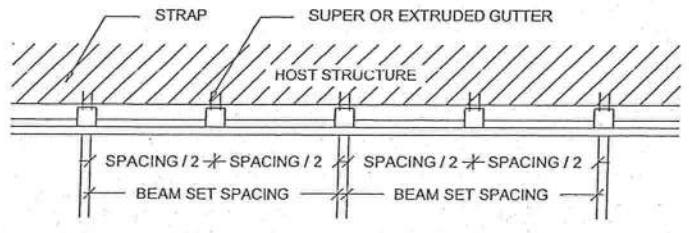
ISOMETRIC VIEW
SCALE: N.T.S.

LATERAL BEAM BRACING DETAILS (FOR SPANS GREATER THAN 40'-0")

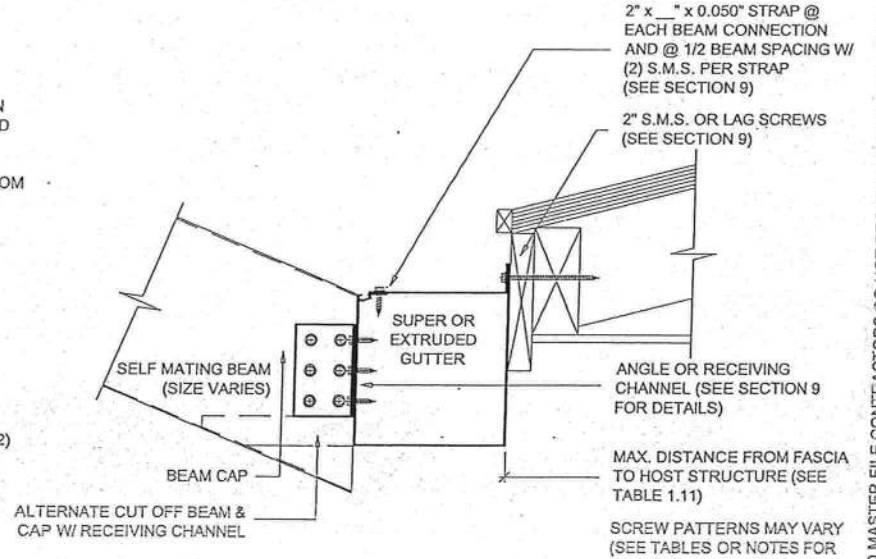
NOTES:
1. REQUIRED FOR SPANS GREATER THAN 40' AND ALL DOME OR TRANSVERSE GABLE ENCLOSURES.
2. ALL 2x4 AND LARGER PURLINS SHALL HAVE AN INTERNAL OR EXTERNAL ANGLE CLIP OR SCREW BOSS TO FASTEN THE BOTTOM OF THE PURLIN TO THE BEAM OR SCREW BOSS.



OUTER MITER DETAIL FOR SUPER GUTTER TO CARRIER BEAM
SCALE: 2" = 1'-0"



STRAP LOCATION FOR SUPER OR EXTRUDED GUTTER REINFORCEMENT
SCALE: 1/4" = 1'-0"



SELF MATING BEAM CONNECTION TO SUPER OR EXTRUDED GUTTER
SCALE: 2" = 1'-0"

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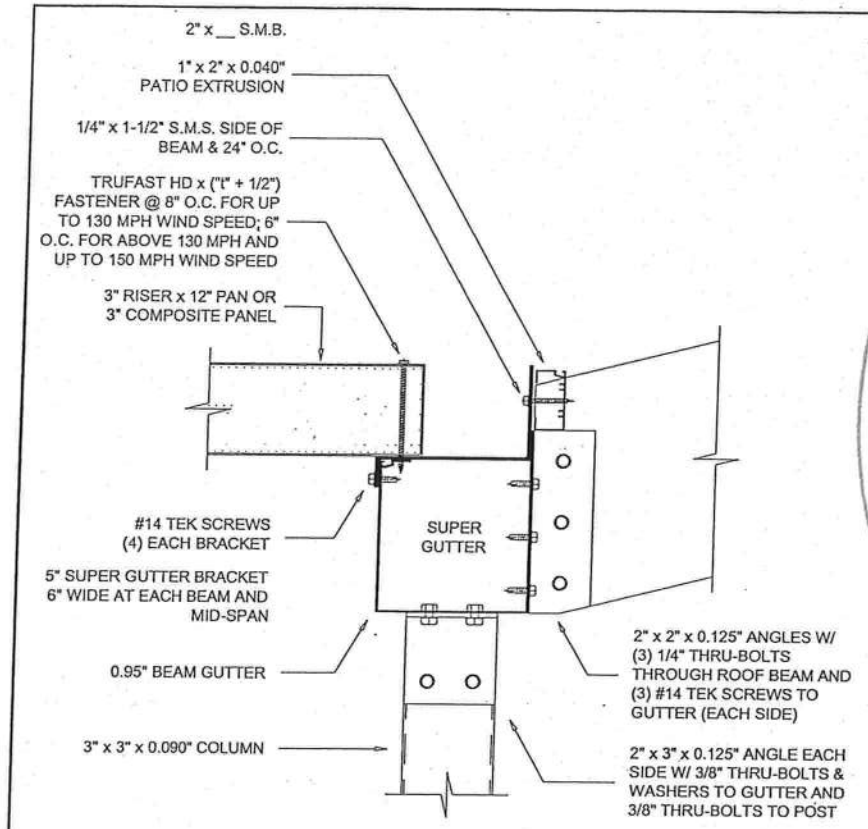
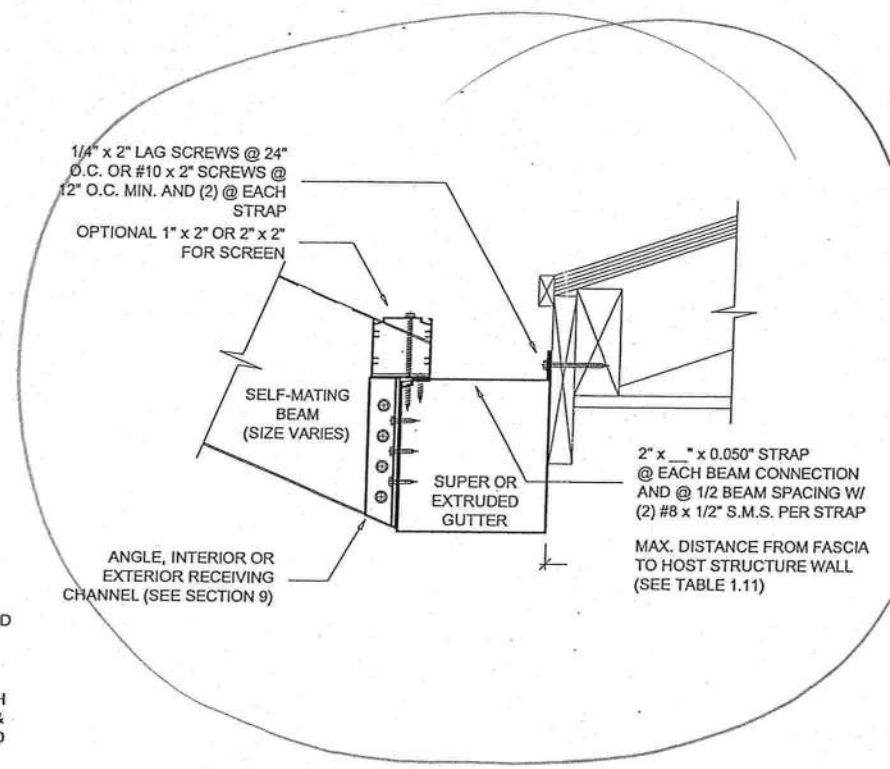
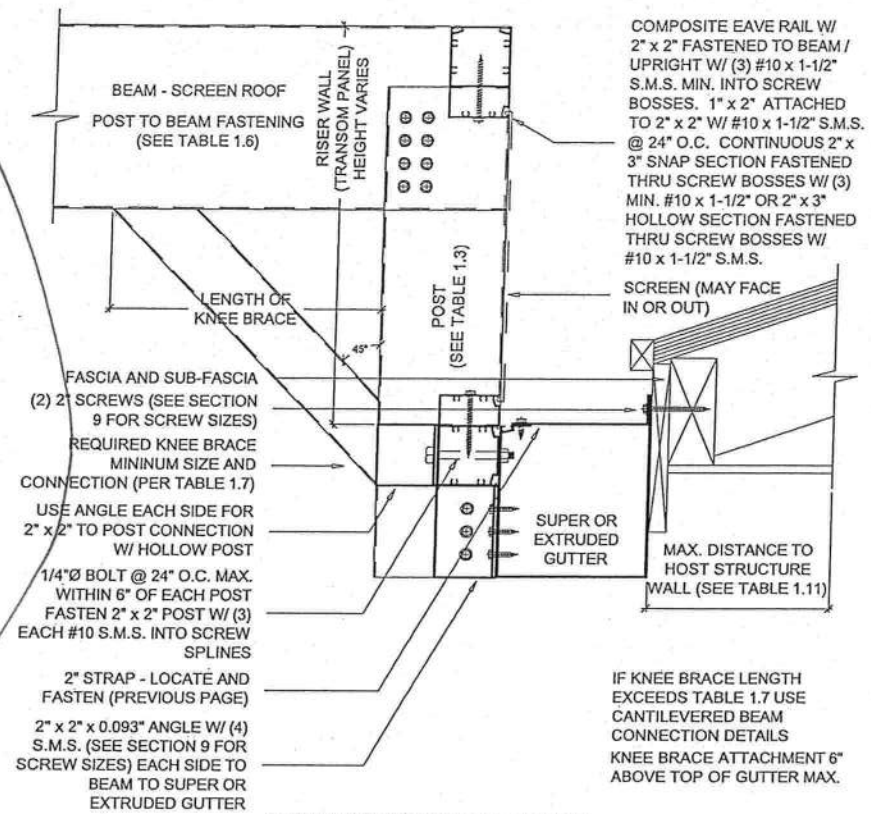


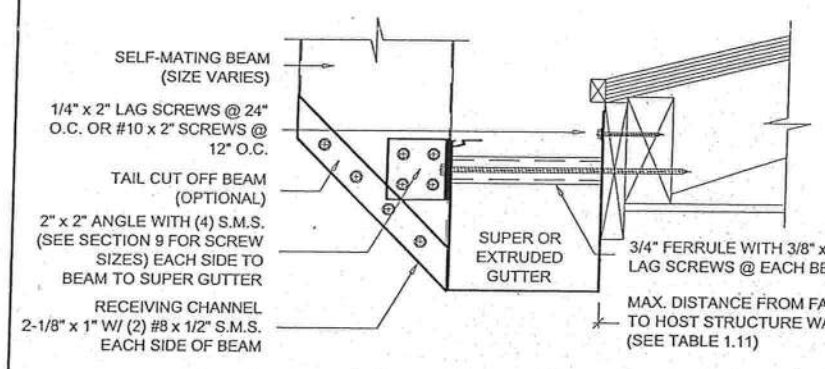
ALTERNATE SELF-MATING BEAM CONNECTION TO SUPER GUTTER
SCALE: 2" = 1'-0"



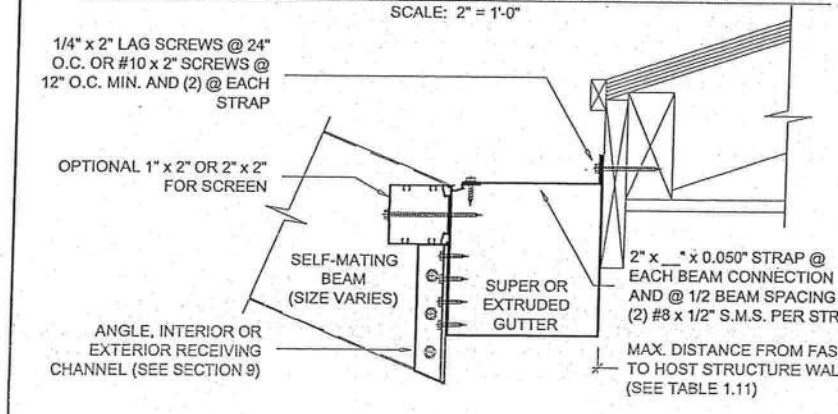
ALTERNATE SELF MATING BEAM CONNECTION TO SUPER OR EXTRUDED GUTTER
SCALE: 2" = 1'-0"



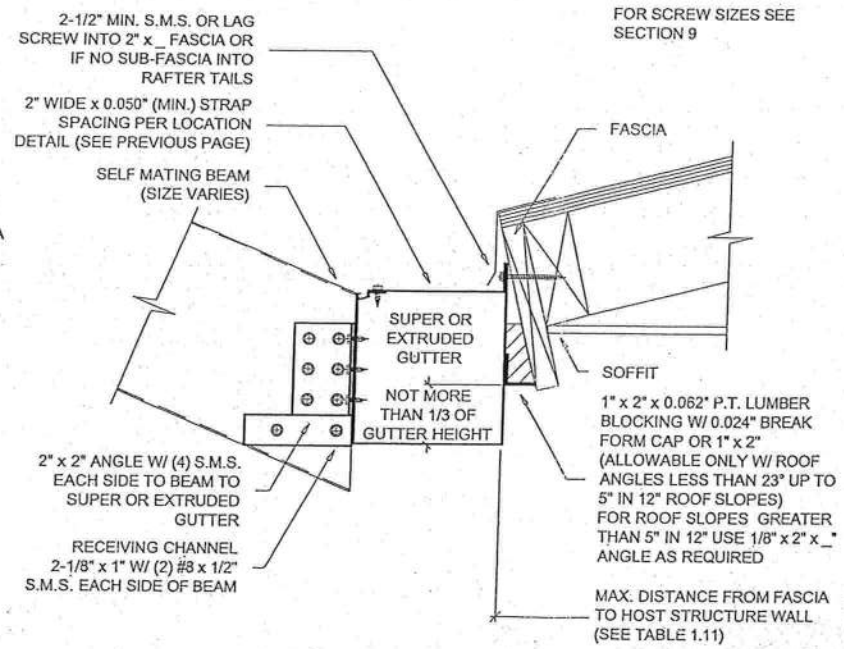
SUPER OR EXTRUDED GUTTER
RISER (OR TRANSOM) WALL AT FASCIA - DETAIL 1
SCALE: 2" = 1'-0"



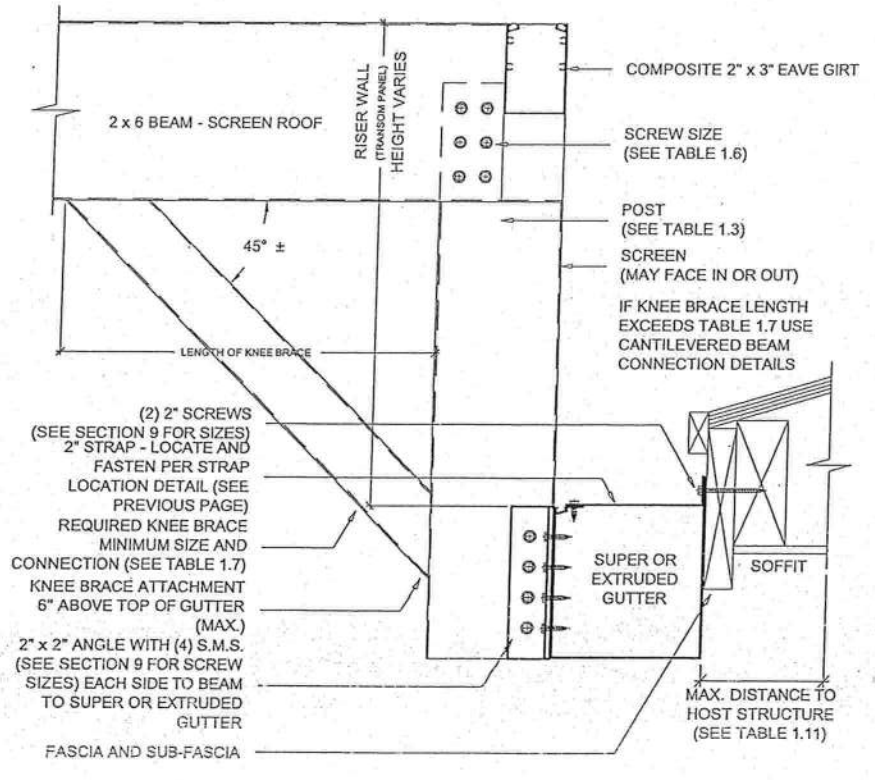
SELF MATING BEAM AND SUPER OR EXTRUDED GUTTER CONNECTION
SCALE: 2" = 1'-0"



SELF MATING BEAM CONNECTION TO SUPER OR EXTRUDED GUTTER
SCALE: 2" = 1'-0"



TYPICAL SELF MATING BEAM AND SUPER OR EXTRUDED GUTTER CONNECTION
SCALE: 2" = 1'-0"



SUPER OR EXTRUDED GUTTER
RISER (OR TRANSOM) WALL AT FASCIA - DETAIL 2
SCALE: 2" = 1'-0"

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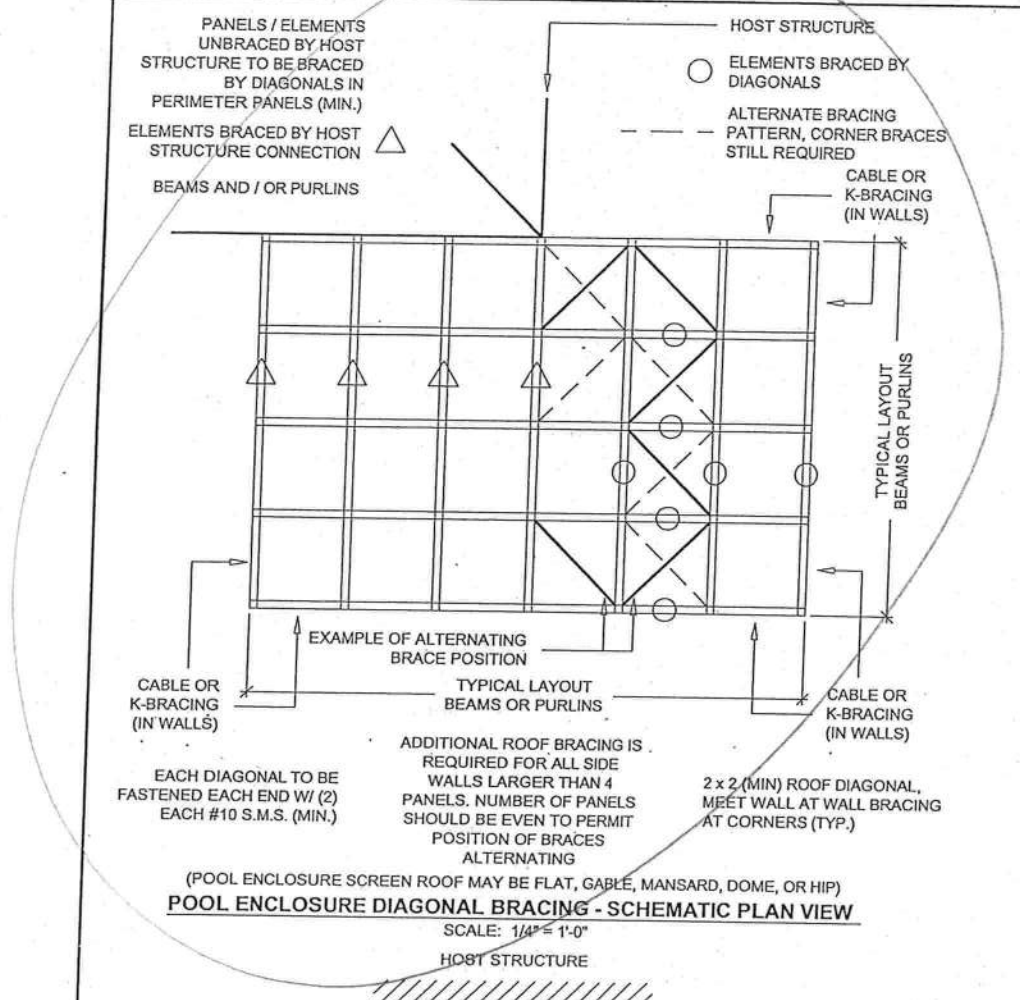
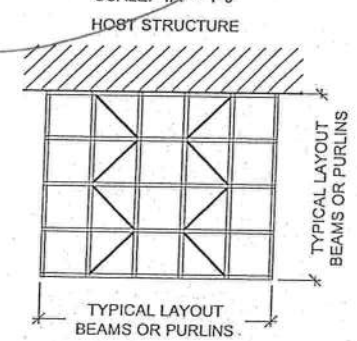


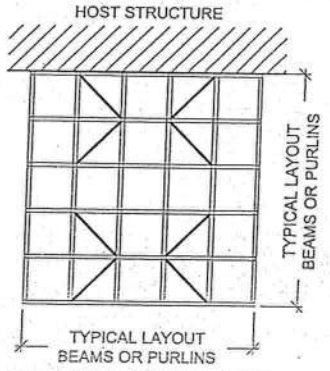
POOL ENCLOSURE DIAGONAL BRACING - SCHEMATIC PLAN VIEW

SCALE: 1/4" = 1'-0"



WIND BRACING PATTERN
TYPICAL FOR EVEN NUMBER OF SIDE PANELS OVER 4

SCALE: 1/8" = 1'-0"



WIND BRACING PATTERN
TYPICAL FOR ODD NUMBER OF SIDE PANELS OVER 4

SCALE: 1/8" = 1'-0"

CABLE BRACING

General Notes and Specifications:

1) The following shall apply to the installation of cables as additional bracing to DIAGONAL bracing for pool enclosures:

a) FRONT WALL CABLES - 7 x 19 STAINLESS STEEL

CABLE DIAMETER	TOTAL ALLOWABLE WALL AREA *
3/32"	233 Sq. Ft. / PAIR OF CABLES
1/8"	445 Sq. Ft. / PAIR OF CABLES

* TOTAL WALL AREA = 100% OF FRONT WALL + 50% OF ONE SIDE WALL

EXAMPLE: FRONT WALL AREA @ 100% (8' x 32') = 256 Sq. Ft.
SIDE WALL AREA @ 50% (8' x 20') = 80 Sq. Ft.
TOTAL WALL AREA = 336 Sq. Ft.

233 Sq. Ft. x 2 sets = 466 Sq. Ft. > 336 Sq. Ft.; thus two sets of 3/32" cables is required.

b) SIDE WALL CABLES - 7 x 19 STAINLESS STEEL

CABLE DIAMETER	SIDE WALL CABLE **
3/32"	ONE PER 233 Sq. Ft. OF WALL
1/8"	ONE PER 445 Sq. Ft. OF WALL

** SIDE WALL CABLES ARE NOT REQUIRED FOR SIDE WALLS LESS THAN 233 Sq. Ft.

c) To calculate the required pair of cables for free standing pool enclosures use 100% of each wall area & 50% of the area of one adjacent wall.

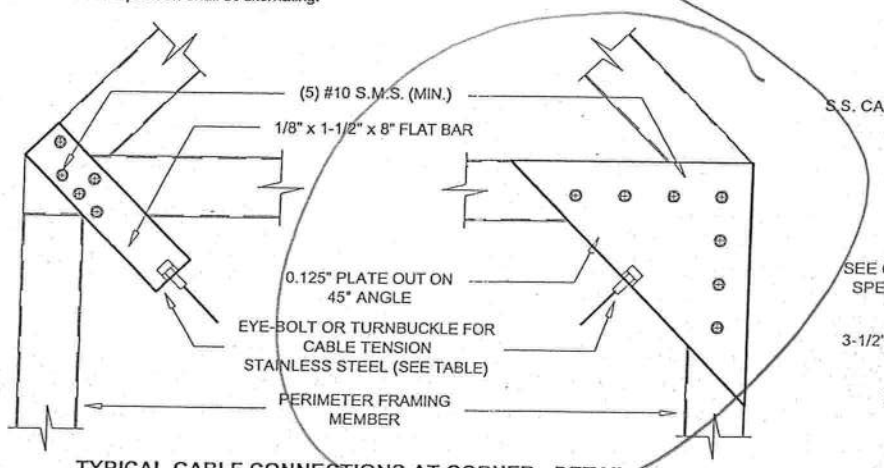
NOTES:

1. Where wall height is such that a girt is required between the top or eave rail and the chair rail, (i.e. a mid-rise girt), then the front wall shall have two cable pairs and they shall be attached to the top rail and the mid-rise rail. If more than one additional girt is required between the top or eave rail and the chair rail, then there shall be an additional front wall cable pair at that girt also.

2. Side walls do not require cables until the side wall area is greater than 233 Sq. Ft.. The side wall cable may be attached at the mid-rise girt or the top rail.

3. Standard rounding off rules apply. ie: if the number of cables calculated is less than 2.5 pairs use two cables; if the number of cables calculated is 2.5 pairs or greater use 3 pairs of cables.

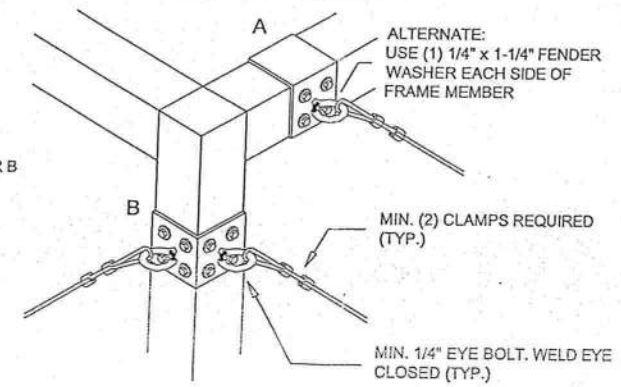
4. Additional roof bracing is required for all side walls larger than 4 panels. Number of panels shall be even and position shall be alternating.



TYPICAL CABLE CONNECTIONS AT CORNER - DETAIL 1

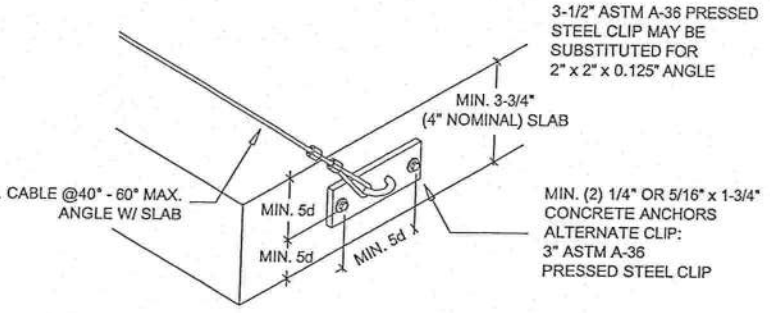
SCALE: 2" = 1'-0"

1" x 2" x 0.125" CLIP AND (4) #10 x 3/4" S.M.S. EACH SIDE FOR CABLES



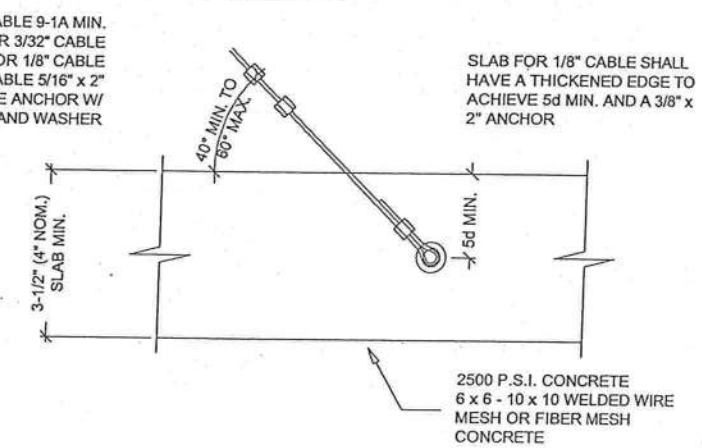
ALTERNATE TOP CORNER OF CABLE CONNECTION - DETAIL 1A

SCALE: 2" = 1'-0"



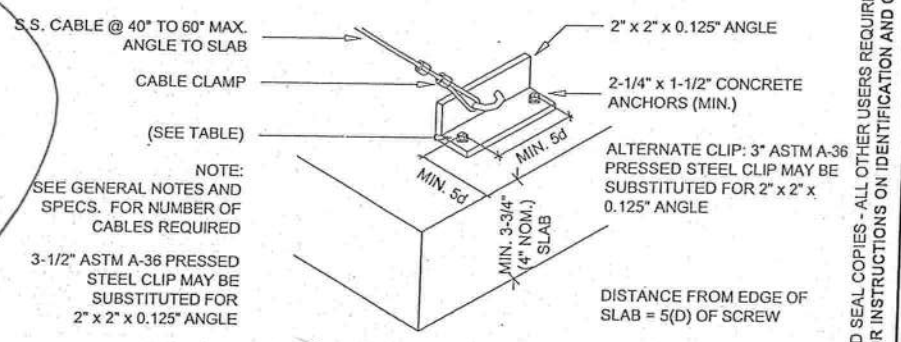
TYPICAL CABLE CONNECTION AT SLAB DETAIL - DETAIL 2

SCALE: 2" = 1'-0"



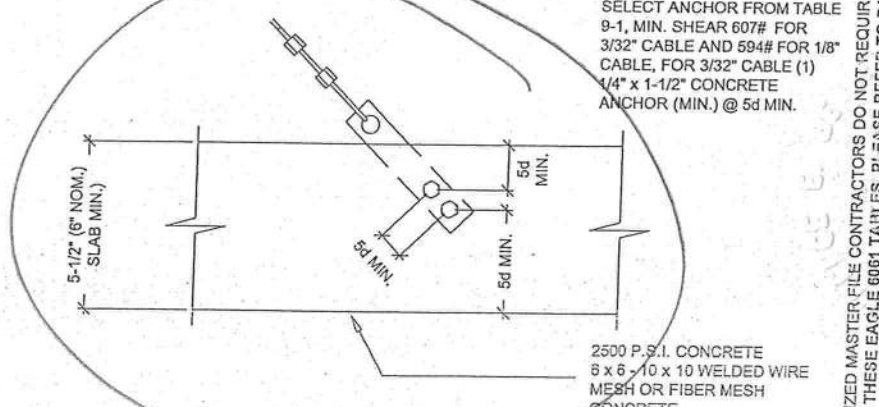
ALTERNATE CABLE CONNECTIONS AT FOUNDATION - DETAIL 2A

SCALE: 2" = 1'-0"



ALTERNATE CABLE CONNECTION AT SLAB DETAIL - DETAIL 2B

SCALE: 2" = 1'-0"



ALTERNATE CABLE CONNECTIONS AT FOUNDATION - DETAIL 2C

SCALE: 2" = 1'-0"

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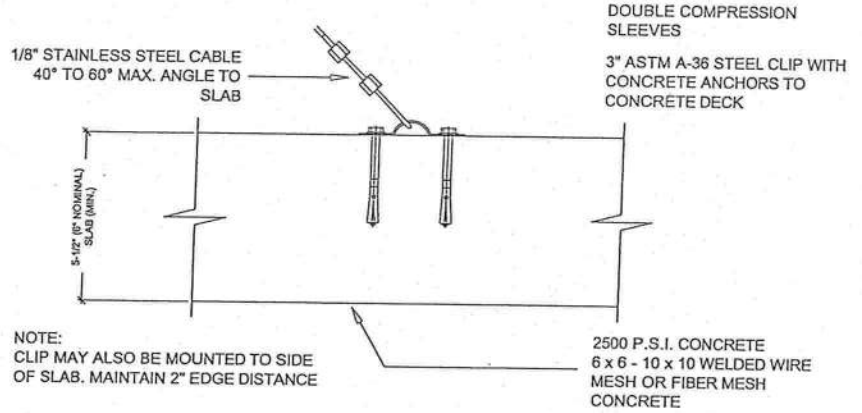


ALTERNATE CABLE CONNECTIONS AT FOUNDATION - DETAIL 2D

SCALE: 2" = 1'-0"

K-BRACING

General Notes and Specifications:

1) The following shall apply to the installation of K-BRACINGas additional bracing to diagonal wind bracing for pool enclosures:

   a) FRONT WALL K-BRACING - ONE SET FOR EACH 800 SF OF TOTAL WALL AREA
   TOTAL WALL AREA = 100% OF FRONT WALL + 50% OF ONE SIDE WALL

   EXAMPLE: FRONT WALL AREA @ 100% (8' x 32') = 256 Sq. Ft.
   SIDE WALL AREA @ 50% (8' x 20') = 80 Sq. Ft.
   TOTAL WALL AREA = 336 Sq. Ft.

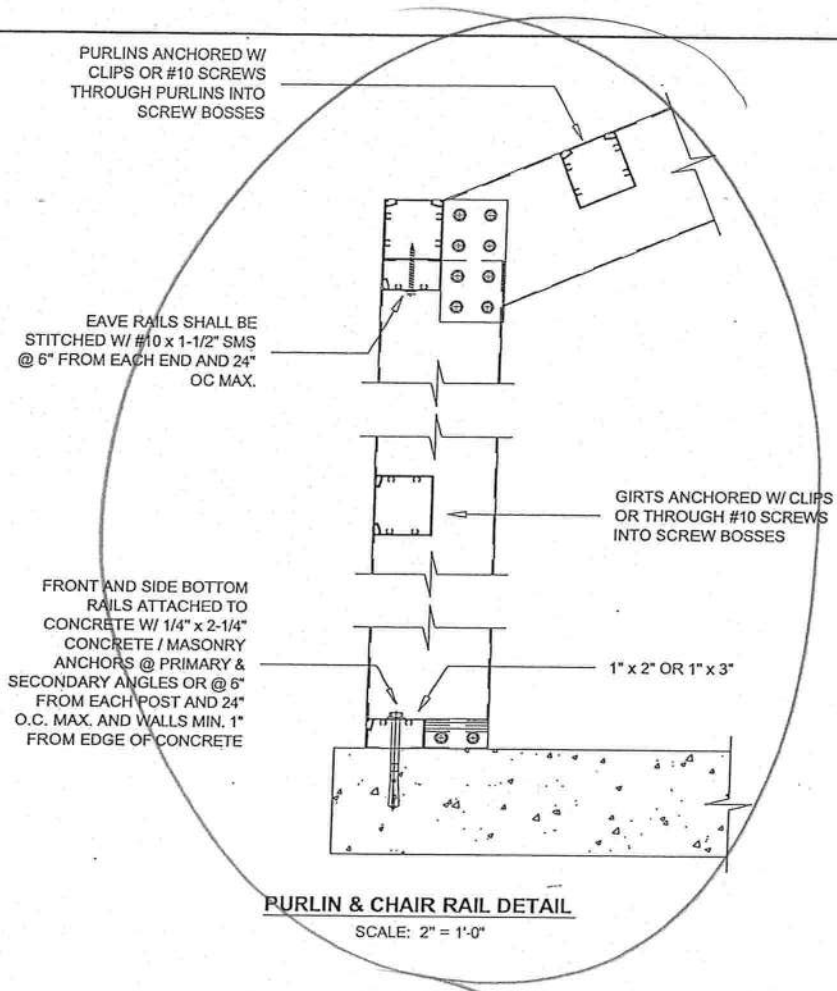
   800 SF > 336 SF THUS ONE SET OF FRONT WALL K-BRACING IS REQUIRED.

   b) SIDE WALL K-BRACING - ONE SET FOR 233 SF TO 800 SF OF WALL.

   c) To calculate the required pair of k-bracing for free standing pool enclosures use 100% of each wall area & 50% of the area of one adjacent wall.

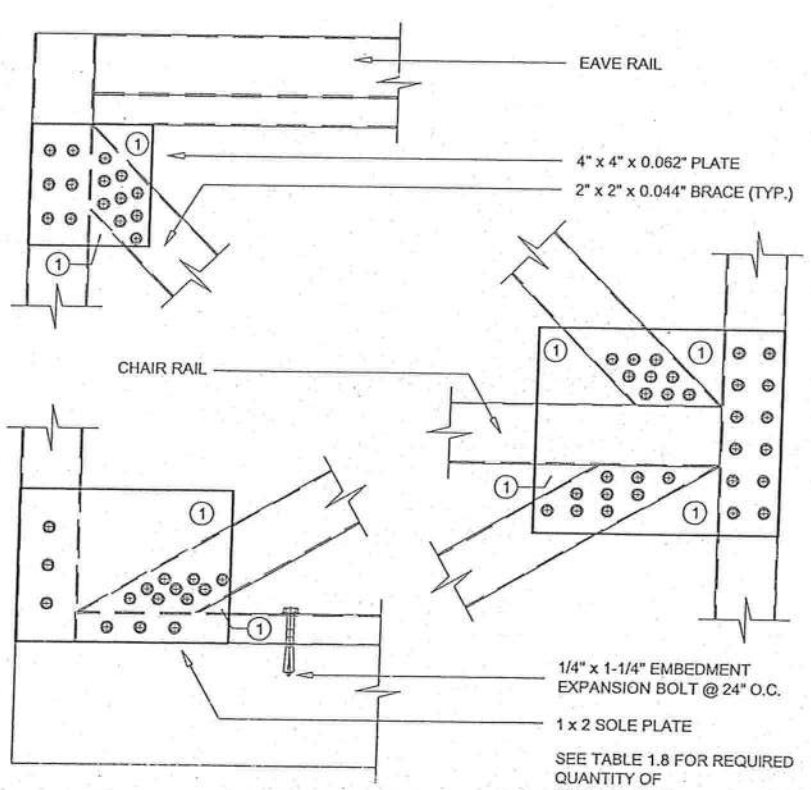
NOTES:

1. K-bracing shall be used for all wind zones of 130 MPH and higher.
2. Side walls do not require k-bracing until the side wall area is greater than 233 SF.
3. Standard rounding off rules apply. ie: if the number of k-bracing sets calculated is less than 1.5 sets use one set of k-braces; if the number of k-braces calculated is 1.5 sets or greater use 2 sets of k-bracing.



PURLIN & CHAIR RAIL DETAIL

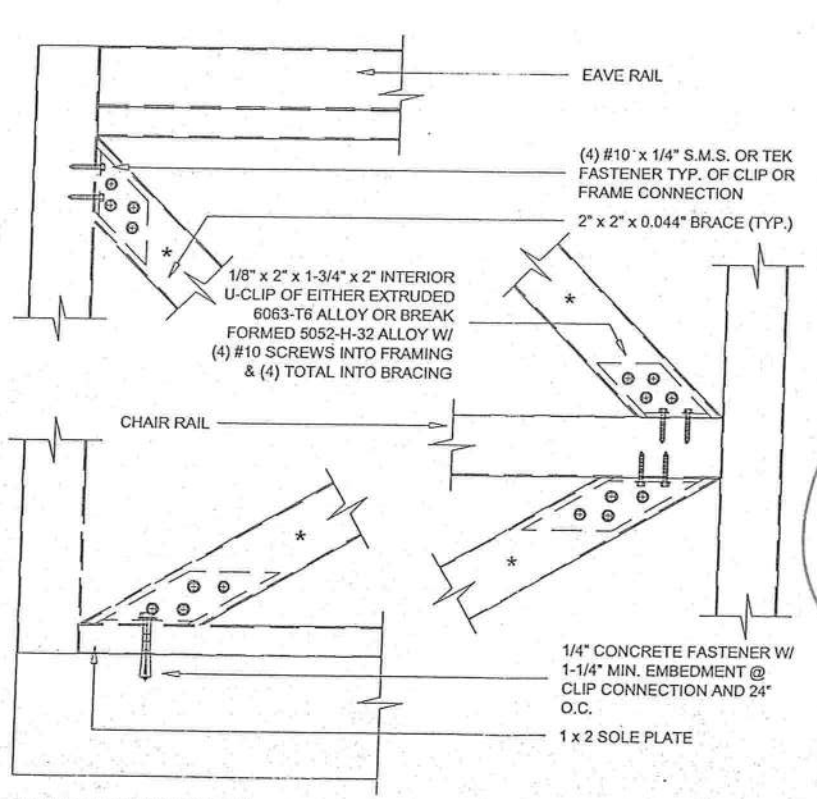
SCALE: 2" = 1'-0"



K-BRACING CONNECTION DETAILS

SCALE: 2" = 1'-0"

NOTES:
1. Can trim plate this area.
2. Alternate connections use 'H' bar cut to fit connections.

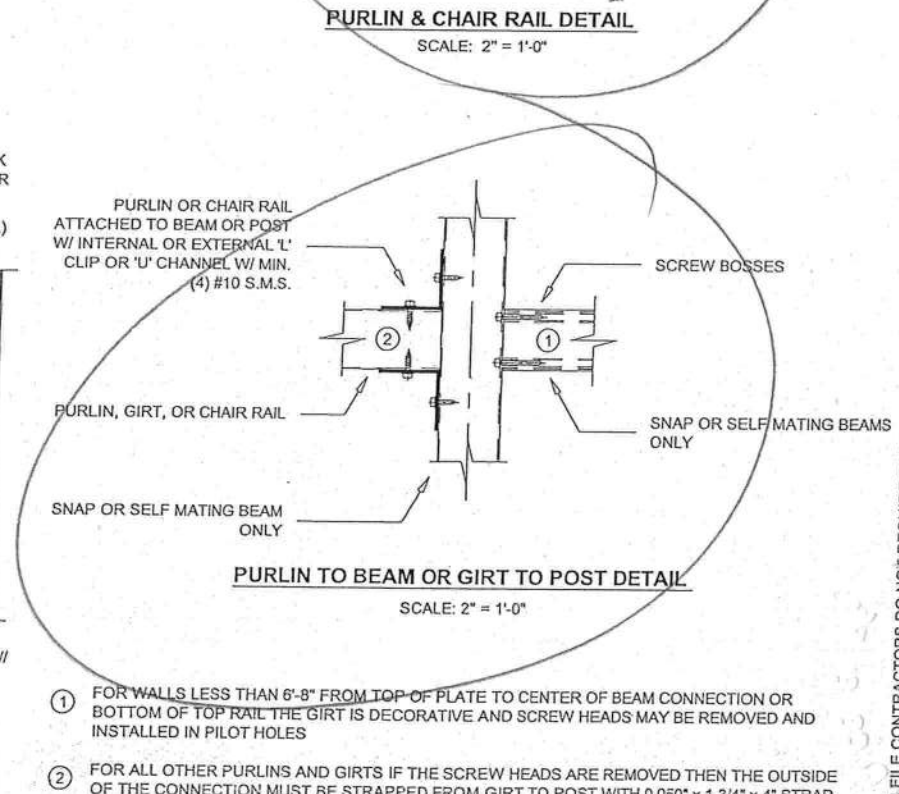


* TELSCOPING BRACE SYSTEM

ALTERNATE K-BRACING CONNECTION DETAILS

SCALE: 2" = 1'-0"

NOTE:
Alternate connections use 'H' bar cut to fit connections.



PURLIN TO BEAM OR GIRT TO POST DETAIL

SCALE: 2" = 1'-0"

① FOR WALLS LESS THAN 6'-8" FROM TOP OF PLATE TO CENTER OF BEAM CONNECTION OR BOTTOM OF TOP RAIL THE GIRT IS DECORATIVE AND SCREW HEADS MAY BE REMOVED AND INSTALLED IN PILOT HOLES

② FOR ALL OTHER PURLINS AND GIRTS IF THE SCREW HEADS ARE REMOVED THEN THE OUTSIDE OF THE CONNECTION MUST BE STRAPPED FROM GIRT TO POST WITH 0.050" x 1-3/4" x 4" STRAP AND (4) #10 x 3/4" S.M.S. SCREWS TO POST AND GIRT

IF GIRT IS ON BOTH SIDES OF THE POST THEN STRAP SHALL BE 6" LONG AND CENTERED ON THE POST AND HAVE A TOTAL (12) #10 x 3/4" S.M.S.

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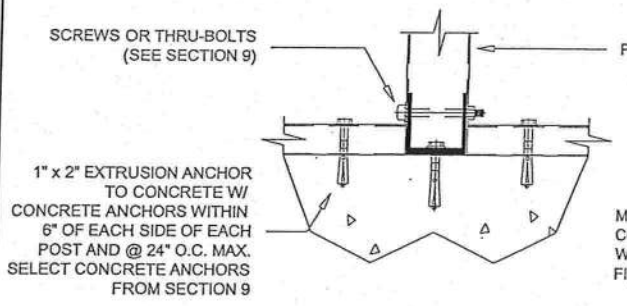
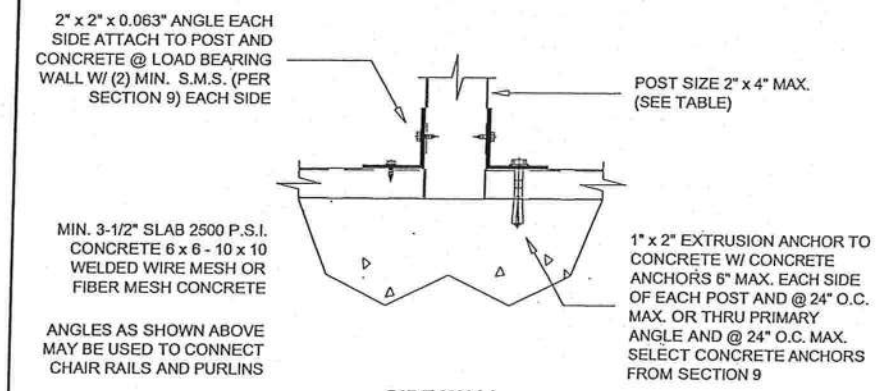
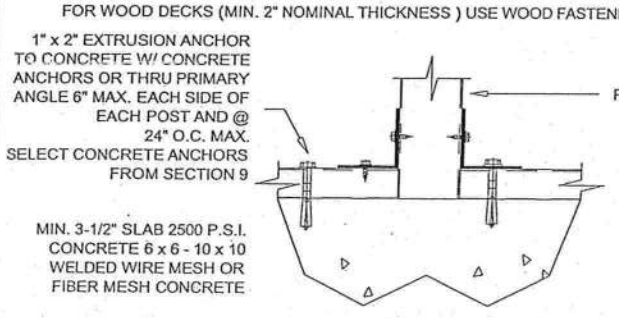


SIDE WALL
POST TO PLATE TO CONCRETE DETAIL
SCALE: 2" = 1'-0"

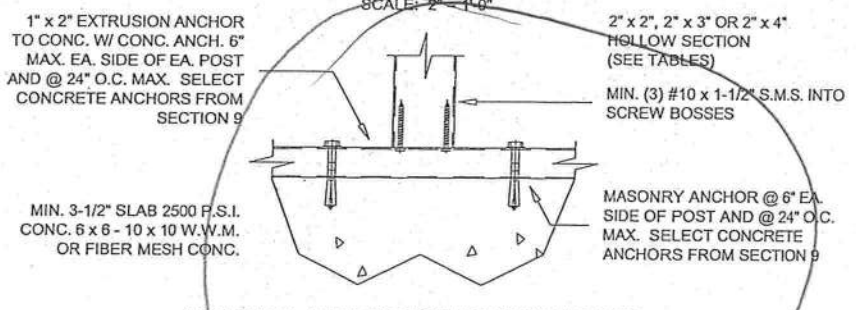


SIDE WALL
ALTERNATE POST TO BEAM AND PLATE TO CONCRETE DETAIL
SCALE: 2" = 1'-0"

FOR WOOD DECKS (MIN. 2" NOMINAL THICKNESS) USE WOOD FASTENERS W/ THESE DETAILS



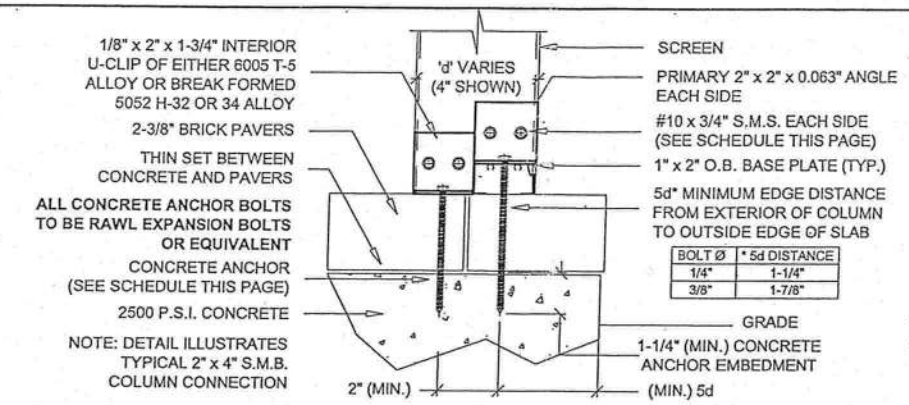
SIDE WALL POST TO PLATE TO CONCRETE DETAIL
SCALE: 2" = 1'-0"



SIDE WALL HOLLOW POST TO BASE DETAIL
SCALE: 2" = 1'-0"

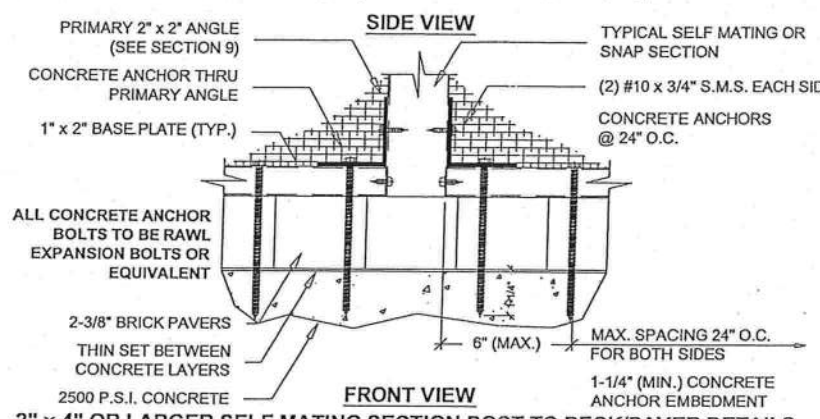
POOL ENCLOSURE UPRIGHT TO DECK ANCHOR REQUIREMENTS

General Notes and Specifications:
1. The uplift load on a pool enclosure upright is calculated as 1/2 the beam span x the beam spacing x the screen load of 7# / Sq. Ft.
   EXAMPLE:
   FOR A 2" x 6" BEAM WITH A SPAN OF 23' AND A BEAM & UPRIGHT SPACING OF 7' USE: 1/2 x 17'-11" x 7' X 10# / Sq. Ft. = 627.2# UPLIFT
2. Table 1.6 of this manual uses the worst case loads for all cases.
3. In all cases there must be a primary anchor within 6" of each side of the upright.
4. For attachment to wood deck (min. 2" nominal thickness) use wood anchors with details shown above (min. 1-3/8" embedment).



BOLT Ø	* 5d DISTANCE
1/4"	1-1/4"
3/8"	1-7/8"

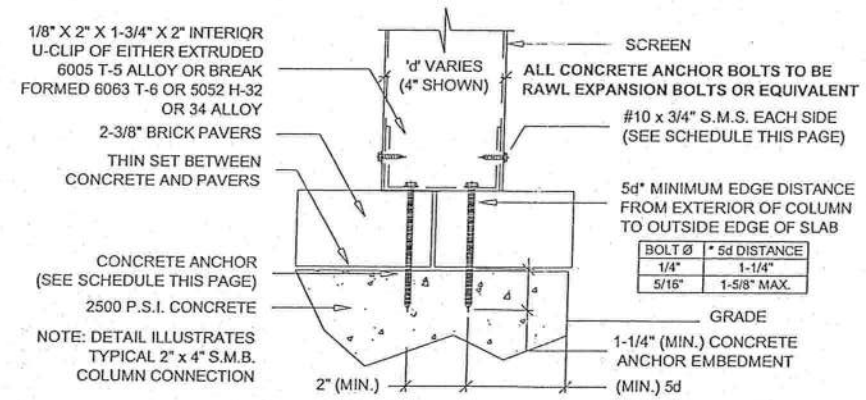
SIDE VIEW



FRONT VIEW

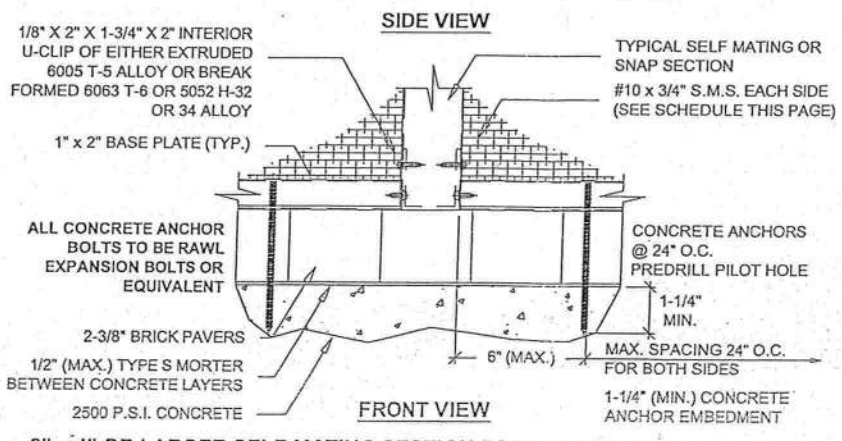
2" x 4" OR LARGER SELF MATING SECTION POST TO DECK/PAVER DETAILS
SCALE: 2" = 1'-0"

NOTE: FOR SIDE WALLS OF 2" x 4" OR SMALLER ONLY ONE ANGLE IS REQUIRED.



BOLT Ø	* 5d DISTANCE
1/4"	1-1/4"
5/16"	1-5/8" MAX.

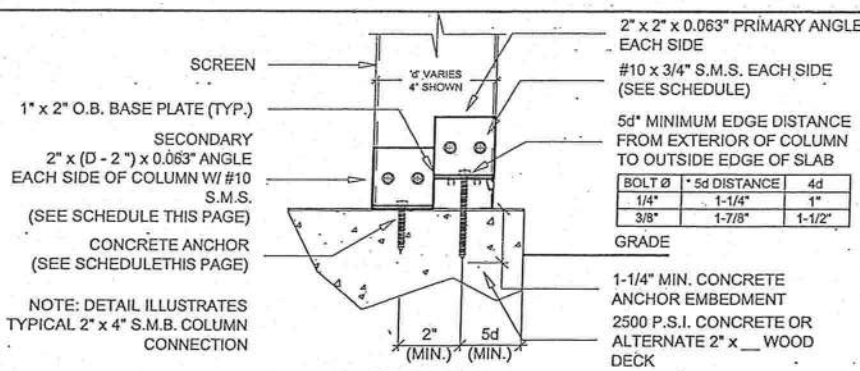
SIDE VIEW



FRONT VIEW

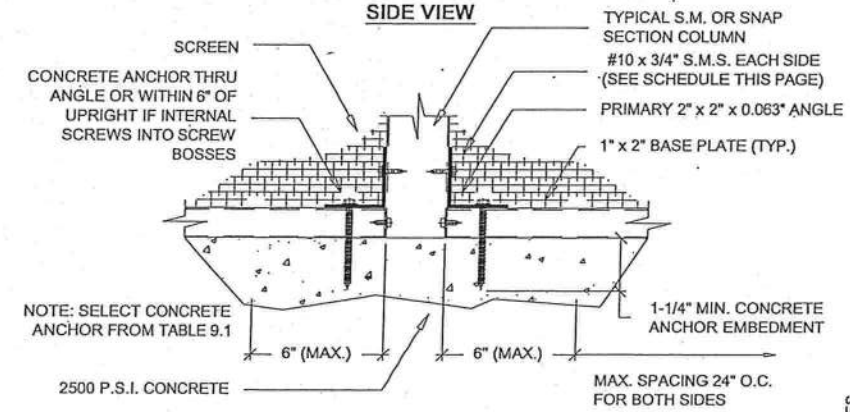
2" x 4" OR LARGER SELF MATING SECTION POST TO DECK/PAVER DETAILS
SCALE: 2" = 1'-0"

NOTE:
1. FOR SIDE WALLS OF 2" x 4" OR SMALLER ONLY ONE ANGLE IS REQUIRED.
2. PREDRILL PAVERS W/ MIN. 1/4" MASONRY BIT.



BOLT Ø	* 5d DISTANCE	4d
1/4"	1-1/4"	1"
3/8"	1-7/8"	1-1/2"

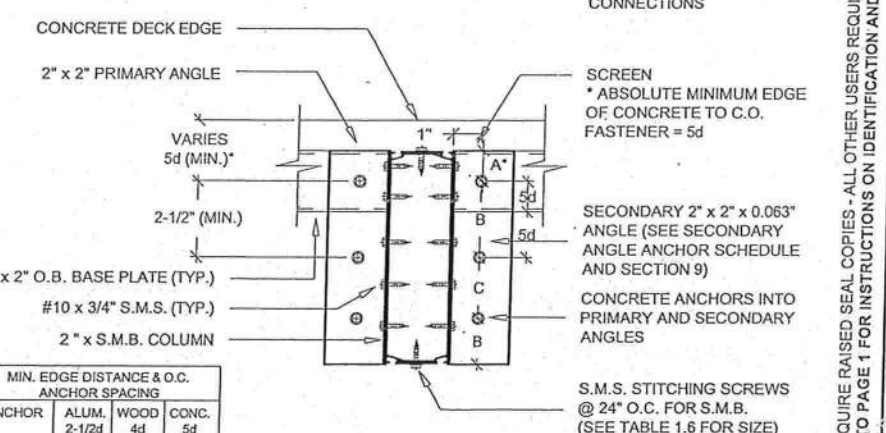
SIDE VIEW



FRONT VIEW

2" x 4" OR LARGER SELF MATING OR SNAP SECTION POST TO DECK DETAILS
SCALE: 2" = 1'-0"

NOTE:
1. FOR SIDE WALLS OF 2" x 4" OR SMALLER ONLY ONE ANGLE IS REQUIRED.
2. PREDRILL PAVERS W/ MIN. 1/4" MASONRY BIT.



MIN. EDGE DISTANCE & O.C. ANCHOR SPACING			
ANCHOR	ALUM. 2-1/2d	WOOD 4d	CONC. 5d
1/4"	5/8"	1"	1-1/4"
5/16"	25/32"	1-1/4"	1-9/16"
3/8"	15/16"	1-1/2"	1-7/8"

TOP VIEW POST TO DECK DETAIL
SCALE: 2" = 1'-0"

Primary and Secondary Anchor Schedule

Column Size	Secondary Angle				Maximum Number and Spacing Anchors											
	Angle	Number of Anchors			1/4"				5/16"				3/8"			
	Length "L"	1/4"	5/16"	3/8"	#	"A"	"B"	"C"	#	"A"	"B"	"C"	#	"A"	"B"	"C"
2 x 4	2"	4	4	4	4	1"	1"	1"	4	1"	1"	1"	4	1"	1"	1"
2 x 5	3"	4	4	4	4	1"	1-1/2"	-	4	1"	1-1/2"	-	4	1"	1-1/2"	-
2 x 6	4"	4	4	4	4	1"	2"	-	4	1"	2"	-	4	1"	2"	-
2 x 7	5"	6	4	4	6	1"	5/8"	1-7/8"	4	1"	2-1/2"	-	4	1"	2-1/2"	-
2 x 8	6"	6	4	4	6	1"	5/8"	2-3/8"	4	1"	3"	-	4	1"	3"	-
2 x 9	7"	6	6	4	6	1"	5/8"	2-7/8"	6	1"	13/16"	2-7/8"	4	1"	3-1/2"	-
2 x 10	8"	8	6	6	8	1"	5/8"	2"	6	1"	13/16"	3-3/16"	6	1"	3/4"	3-1/4"

Example:
Calculate the number of anchors required: 1.5 x beam span / 2 x beam spacing x roof wind pressure (PSF) = total #;
1.5 x 30/2 x 6' x 10 PSF = = 1350# and 1/4" x 1/4" Tapcon in tension @ 5d = 427# / ea. (see table 9.1)
then 1350# / 427# / ea. = 3.16 ea. use (3) ea., secondary angle not required
Actual Edge Distance Example:
From edge of concrete to fastener = 2" / dia. of 0.25" = 8d
Note:
For attachment to wood deck substitute wood fasteners for concrete fasteners & calculate the required number of fasteners using tables from section 9.

10-31-2007

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THE FREEDOM OF CHOICE
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ALUMINUM STRUCTURES DESIGN MANUAL
SCREEN ENCLOSURES
SECTION 1 DETAILS
2004 FBC W/ 2006 SUPPLEMENTS
2006 EDITION

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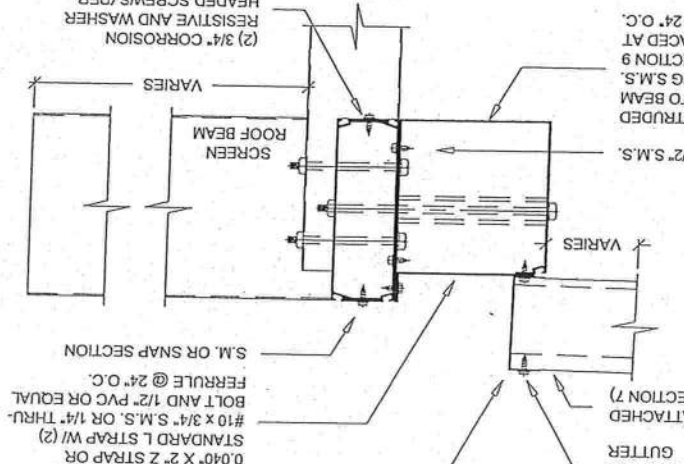
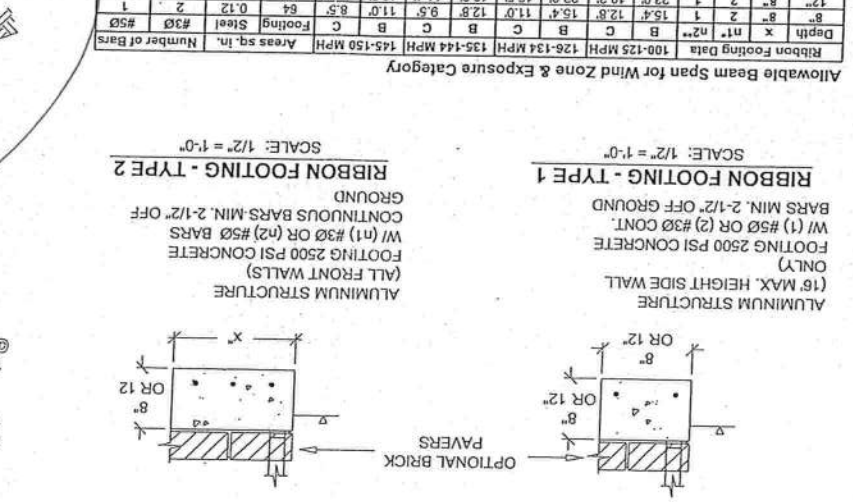


SUPER OR EXTRUDED GUTTER - SOLID ROOF / SCREEN ROOF COMBINATION

SCALE: 2" = 1'-0"

NOTE:
BEAM MAY BE ATTACHED TO SUPER GUTTER AND SOLID ROOF TO S.M.B. PROVIDED A STRAP OR 1/2" P.V.C. OR EQUAL FERRULE IS PROVIDED AT EACH BEAM.



RIBBON FOOTING - TYPE 1

SCALE: 1/2" = 1'-0"

RIBBON FOOTING - TYPE 2

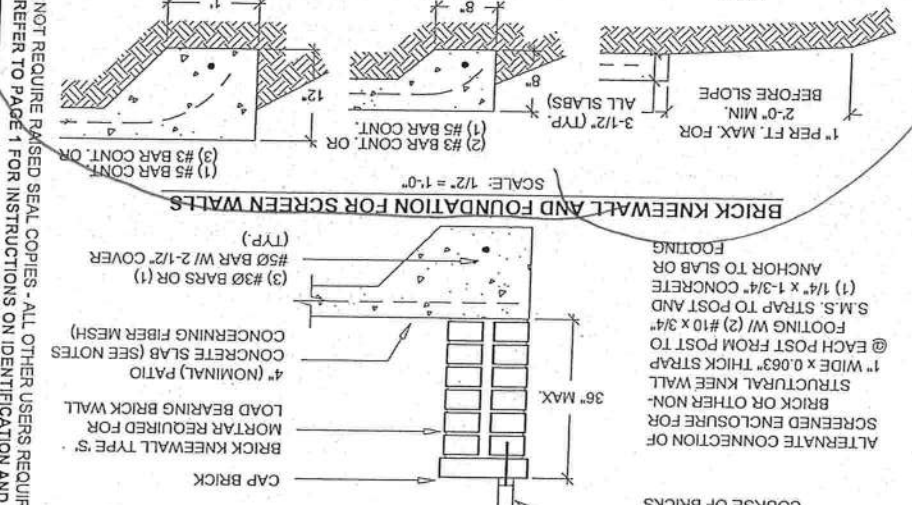
SCALE: 1/2" = 1'-0"

Allowable Beam Span for Wind Zone & Exposure Category

Ribbon Footing Data			100-125 MPH	126-134 MPH	135-144 MPH	145-150 MPH	Areas sq. in.	Number of Bars	
Depth	x	n1*	n2**	B C	B C	B C	Footing	Steel	#3Ø	#5Ø
8"	8"	2	1	15.4" 12.8"	15.4" 11.0"	12.8" 9.5"	64	0.12	2	1
12"	8"	2	1	23.0" 19.2"	23.0" 16.5"	19.2" 14.4"	96	0.18	2	1
8"	12"	2	1	23.0" 19.2"	23.0" 16.5"	19.2" 14.4"	72	0.13	2	1
12"	12"	3	2	24.0" 20.0"	24.0" 17.1"	20.0" 17.1"	144	0.26	3	2
8"	16"	3	2	31.9" 26.6"	31.9" 21.9"	26.6" 19.2"	128	0.24	3	2
12"	16"	3	2	32.0" 26.7"	32.0" 22.5"	26.7" 20.0"	192	0.35	4	2
12"	18"	3	2	36.0" 30.0"	36.0" 25.7"	30.0" 22.5"	216	0.39	4	2
12"	24"	4	3	48.0" 40.0"	48.0" 34.3"	40.0" 30.0"	288	0.52	-	2
12"	30"	4	3	57.6" 48.0"	57.6" 41.1"	48.0" 36.0"	360	0.65	-	2
12"	36"	5	4	69.1" 57.6"	69.1" 49.4"	57.6" 43.2"	432	0.78	-	3

3-1/2"	100-125 MPH		126-134 MPH		135-144 MPH		145-150 MPH	
Nominal "d" Slab	B	C	B	C	B	C	B	C
Depth	50.4"	42.0"	50.4"	36.0"	42.0"	31.5"	36.0"	28.0"

*n1 = number of #3Ø bars @ 0.11 sq. in. grade 60 steel
**n2 = number of #5Ø bars @ 0.31 sq. in grade 60 steel



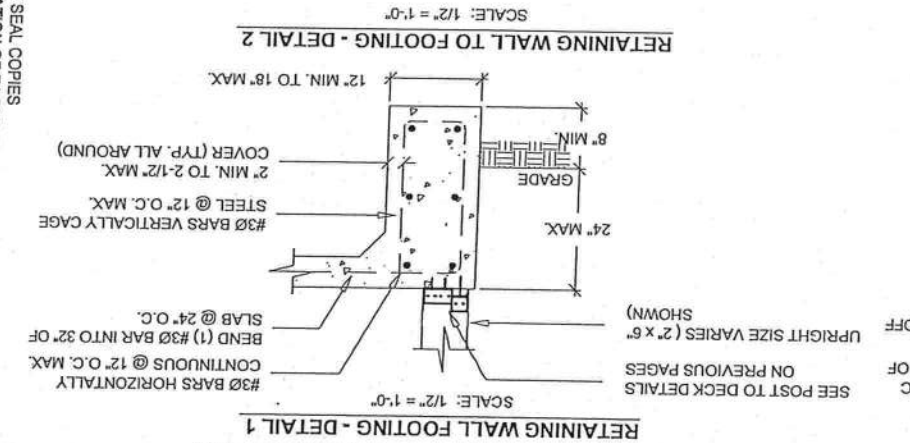
Notes for all foundation Types:

1. The foundations shown are based on a minimum soil bearing pressure of 1,500 PSF. Bearing capacity of soil shall be verified prior to placing slab by field soil test (soil penetrometer) or a soil testing lab.
2. The slab / foundation shall be cleared of debris, roots and compacted prior to placement of concrete.
3. No footing is required except when addressing erosion until the slab width in the direction of the primary beams exceeds the span per table or to the left, then a type II slab or required under the load bearing wall only unless the side wall exceeds 18" in height or the enclosure is in a "C" exposure category in which case a type II footing is required.
4. Monolithic slabs and footings shall be minimum 2,500 psi concrete with 6 x 6 - 10 x 10 welded wire mesh or crack control fiber mesh; Fibermesh® by Fibermesh, Inforce™ 83™ (Formerly Fibermesh MD) per manufacturer's specification may be used in lieu of wire mesh. All slabs / footings shall be allowed to cure for 7 days before installing anchors.
5. If local codes require a minimum footing use Type II footing or footing section required by local code. Local codes govern.

SLAB-FOOTING DETAILS

SCALE: 1/2" = 1'-0"

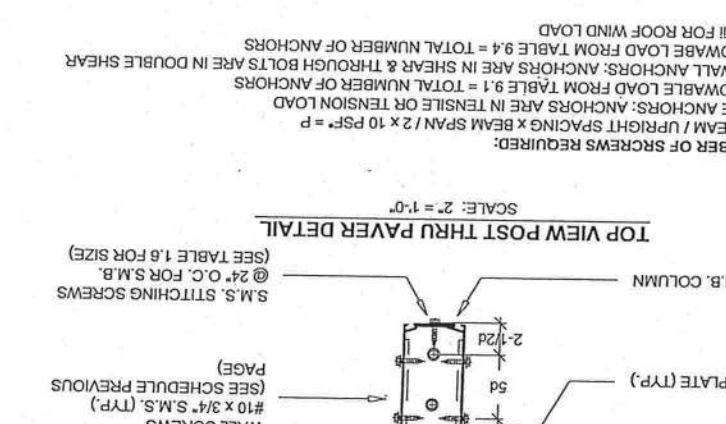
SCALE: 1/2" = 1'-0"



SCALE: 1/2" = 1'-0"

Knee Wall Table

h	W	N		X
		#3	#4	
32"	12"	3	2	10'-0"
40"	12"	3	2	8'-0"
48"	18"	N/A	3	6'-0"
56"	18"	N/A	3	4'-0"
64"	24"	N/A	3	2'-9"
72"	30"	N/A	4	1'-6"



EXAMPLE OF NUMBER OF SRCREWS REQUIRED:
ANCHOR LOAD = BEAM / UPRIGHT SPACING x BEAM SPAN / 2 x 10 PSF* = P
1. CONCRETE ANCHORS: ANCHORS ARE IN TENSILE OR TENSION LOAD
P / ALLOWABLE LOAD FROM TABLE 9.1 = TOTAL NUMBER OF ANCHORS
2. UPRIGHT WALL ANCHORS: ANCHORS ARE IN SHEAR & THROUGH BOLTS ARE IN DOUBLE SHEAR
P / ALLOWABE LOAD FROM TABLE 9.4 = TOTAL NUMBER OF ANCHORS
* SEE PAGE 1ii FOR ROOF WIND LOAD

10-31-2007

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9'.8" ÷ 1.10 = 10.6326'

18X14 SCREEN

Table 1.1 120 E Allowable Spans for Eagle Metal Distributors, Inc. for Primary Screen Roof Frame Members

Aluminum Alloy 6061 T-6

For 110 & 120 MPH Wind Zones, Exposure "B" and Latitudes Below 30°-30'-00" North (Jacksonville, FL)
Uniform Load = 4 #/SF, a Point Load of 300 #/SF over (1) linear ft. is also considered

Hollow Sections	Tributary Load Width 'W' = Beam Spacing											
	3'-0"		4'-0"		5'-0"		6'-0"		7'-0"		8'-0"		9'-0"	
	Allowable Span 'L' / Point Load (P) or Uniform Load (U), bending (b), deflection (d)													
2" x 2" x 0.043"	5'-3"	Pb	5'-3"	Pb	5'-3"	Pb	5'-3"	Pb	5'-3"	Pb	5'-3"	Pb	5'-3"	Pb
3" x 2" x 0.045"	6'-8"	Pd	6'-8"	Pb	6'-8"	Pb	6'-8"	Pb	6'-8"	Pb	6'-8"	Pb	6'-8"	Pb
3" x 2" x 0.070"	8'-4"	Pd	8'-4"	Pd	8'-4"	Pd	8'-4"	Pd	8'-4"	Pd	8'-4"	Pd	8'-4"	Pd
3" x 3" x 0.045"	9'-8"	Pb	9'-8"	Pb	9'-8"	Pb	9'-8"	Pb	9'-8"	Pb	9'-8"	Pb	9'-8"	Pb
2" x 4" x 0.050"	14'-8"	Pd	14'-8"	Pd	14'-8"	Pd	14'-8"	Pd	14'-8"	Pd	14'-8"	Pd	14'-3"	Ud
2" x 5" x 0.060"	21'-1"	Pd	21'-1"	Pd	21'-1"	Pd	20'-9"	Ud	19'-9"	Ud	18'-10"	Ud	18'-2"	Ud

Self Mating Sections	Tributary Load Width 'W' = Beam Spacing											
	3'-0"		4'-0"		5'-0"		6'-0"		7'-0"		8'-0"		9'-0"	
	Allowable Span 'L' / Point Load (P) or Uniform Load (U), bending (b), deflection (d)													
2" x 4" x 0.045 x 0.088"	17'-11"	Pd	17'-11"	Pd	17'-11"	Pd	17'-11"	Pd	17'-8"	Ud	16'-11"	Ud	16'-3"	Ud
2" x 5" x 0.050" x 0.116"	24'-3"	Pd	24'-3"	Pd	24'-2"	Ud	22'-9"	Ud	21'-8"	Ud	20'-8"	Ud	19'-11"	Ud
2" x 6" x 0.050" x 0.120"	30'-8"	Pd	30'-5"	Ud	28'-3"	Ud	26'-7"	Ud	25'-3"	Ud	24'-2"	Ud	23'-3"	Ud
2" x 7" x 0.055" x 0.120"	37'-1"	Pd	34'-7"	Ud	32'-1"	Ud	30'-2"	Ud	28'-8"	Ud	27'-5"	Ud	26'-5"	Ud
2" x 8" x 0.070" x 0.224"	45'-11"	Ud	41'-9"	Ud	38'-10"	Ud	36'-6"	Ud	34'-8"	Ud	33'-2"	Ud	31'-11"	Ud
2" x 9" x 0.070" x 0.204"	49'-7"	Ud	45'-0"	Ud	41'-10"	Ud	39'-4"	Ud	37'-4"	Ud	35'-9"	Ud	34'-4"	Ud
2" x 9" x 0.082" x 0.326"	53'-3"	Ud	48'-5"	Ud	44'-11"	Ud	42'-3"	Ud	40'-2"	Ud	38'-5"	Ud	36'-11"	Ud
2" x 10" x 0.090" x 0.374"	62'-1"	Ud	56'-5"	Ud	52'-4"	Ud	49'-3"	Ud	46'-10"	Ud	44'-9"	Ud	43'-1"	Ud

Note:
1. Thicknesses shown are "nominal" industry standard tolerances. No wall thickness shall be less than 0.040".
2. The structures designed using this section shall be limited to a maximum combined span and upright height of 50' and a maximum upright height of 16'. Structures larger than these limits shall have site specific engineering.
3. Span is measured from center of beam and upright connection to fascia or wall connection.
4. Above spans do not include length of knee brace. Add horizontal distance from upright to center of brace to beam connection to the above spans for total beam spans.
5. Tables are based on a maximum wall height of 16' including a 4' max. mansard or gable. Other conditions may offer better spans w/ enclosure site specific engineering.
6. Spans may be interpolated..
7. To convert spans to "C" and "D" exposure categories see exposure multipliers and example on page 1-ii.

Table 1.2 120 E Allowable Spans for Eagle Metal Distributors, Inc. for Secondary Screen Roof Frame Members

Aluminum Alloy 6061 T-6

'For 110 & 120 MPH Wind Zones, Exposure "B" and Latitudes Below 30°-30'-00" North (Jacksonville, FL)
Uniform Load = 4 #/SF, a Point Load of 300 #/SF over (1) linear ft. is also considered

A. Sections Fastened To Beams With Clips

Hollow Sections	Tributary Load Width 'W' = Purlin Spacing											
	3'-6"		4'-0"		4'-6"		5'-0"		5'-6"		6'-0"		6'-8"	
	Allowable Span 'L' / Point Load (P) or Uniform Load (U), bending (b), deflection (d)													
2" x 2" x 0.043"	5'-5"	Pb	5'-5"	Pb	5'-5"	Pb	5'-5"	Pb	5'-5"	Pb	5'-5"	Pb	5'-5"	Pb
3" x 2" x 0.045"	6'-10"	Pd	6'-10"	Pd	6'-10"	Pd	6'-10"	Pd	6'-10"	Pd	6'-10"	Pd	6'-10"	Pd
3" x 2" x 0.070"	7'-9"	Pd	7'-9"	Pd	7'-9"	Pd	7'-9"	Pd	7'-9"	Pd	7'-9"	Pd	7'-9"	Pd
3" x 3" x 0.045"	8'-7"	Pd	8'-7"	Pd	8'-7"	Pd	8'-7"	Pd	8'-7"	Pd	8'-7"	Pd	8'-7"	Pd
2" x 4" x 0.050"	11'-3"	Pd	11'-3"	Pd	11'-3"	Pd	11'-3"	Pd	11'-3"	Pd	11'-3"	Pd	11'-3"	Pd
2" x 5" x 0.060"	14'-5"	Pd	14'-5"	Pd	14'-5"	Pd	14'-5"	Pd	14'-5"	Pd	14'-5"	Pd	14'-5"	Pd

B. Sections Fastened Through Beam Webs Into Screw Bosses

Hollow Sections	Tributary Load Width 'W' = Purlin Spacing											
	3'-6"		4'-0"		4'-6"		5'-0"		5'-6"		6'-0"		6'-8"	
	Allowable Span 'L' / Point Load (P) or Uniform Load (U), bending (b), deflection (d)													
2" x 2" x 0.043"	8'-2"	Pb	8'-2"	Pb	8'-2"	Pb	8'-2"	Pb	8'-2"	Pb	8'-2"	Pb	8'-2"	Pb
3" x 2" x 0.045"	10'-5"	Pb	10'-5"	Pb	10'-5"	Pb	10'-5"	Ud	10'-1"	Ud	9'-10"	Ud	9'-6"	Ud
3" x 2" x 0.070"	12'-4"	Pd	12'-4"	Pd	12'-4"	Pd	11'-11"	Ud	11'-6"	Ud	11'-2"	Ud	10'-10"	Ud
2" x 3" x 0.045"	13'-8"	Pd	13'-8"	Pd	13'-8"	Pd	13'-2"	Ud	12'-10"	Ud	12'-5"	Ud	11'-11"	Ud
2" x 4" x 0.050"	17'-11"	Pd	17'-11"	Pd	17'-11"	Pd	17'-4"	Ud	16'-9"	Ud	16'-3"	Ud	15'-9"	Ud
2" x 5" x 0.060"	22'-10"	Pd	22'-10"	Pd	22'-10"	Pd	22'-1"	Ud	21'-4"	Ud	20'-9"	Ud	20'-0"	Ud

Note:
1. Thicknesses shown are "nominal" industry standard tolerances. No wall thickness shall be less than 0.040".
2. Span is measured from center of beam and upright connection to fascia or wall connection.
3. Tables are based on a maximum wall height of 16' including a 4' max. mansard or gable. Other conditions may offer better spans w/ enclosure site specific engineering.
4. Spans may be interpolated.
5. 2" x 4" & 2" x 5" Hollow Girts shall be connected w/ an internal or external 1-1/2" x 1-1/2" x 0.044" angle.
6. To convert spans to "C" and "D" exposure categories see exposure multipliers and example on page 1-ii.

Table 1.3 110 E Allowable Post / Upright Heights for Eagle Metal Distributors, Inc. for Primary Screen Wall Frame Members

Aluminum Alloy 6061 T-6

For 3 second wind gust at a velocity of 110 MPH, Exposure "B" or an applied load of 13 #/sq. ft.

Hollow Sections	Tributary Load Width 'W' = Upright Spacing															
	3'-0"		4'-0"		5'-0"		6'-0"		7'-0"		8'-0"		9'-0"	
	Allowable Height "H" / bending (b), deflection (d)													
2" x 2" x 0.043"	7'-5"	d	6'-9"	d	6'-3"	d	5'-10"	d	5'-5"	b	5'-0"	b	4'-8"	b
3" x 2" x 0.045"	8'-4"	d	7'-7"	d	7'-1"	d	6'-8"	d	6'-3"	b	5'-9"	b	5'-5"	b
3" x 2" x 0.070"	9'-6"	d	8'-8"	d	8'-0"	d	7'-7"	d	7'-2"	d	6'-10"	d	6'-7"	d
2" x 3" x 0.045"	10'-7"	d	9'-7"	d	8'-11"	d	8'-3"	b	7'-7"	b	7'-0"	b	6'-7"	b
2" x 4" x 0.050"	13'-10"	d	12'-7"	d	11'-6"	b	10'-5"	b	9'-7"	b	8'-11"	b	8'-4"	b
2" x 5" x 0.060"	17'-8"	d	16'-0"	d	14'-11"	d	14'-0"	d	13'-3"	b	12'-5"	b	11'-9"	b

Self Mating Sections	Tributary Load Width 'W' = Upright Spacing															
	3'-0"		4'-0"		5'-0"		6'-0"		7'-0"		8'-0"		9'-0"	
	Allowable Height "H" / bending (b), deflection (d)													
2" x 4" x 0.045 x 0.088"	15'-10"	d	14'-5"	d	13'-4"	d	12'-7"	d	11'-10"	b	10'-11"	b	10'-3"	b
2" x 5" x 0.050" x 0.116"	19'-5"	d	17'-7"	d	16'-4"	d	15'-5"	d	14'-3"	b	13'-3"	b	12'-4"	b
2" x 6" x 0.050" x 0.120"	22'-7"	d	20'-7"	d	19'-1"	d	17'-6"	b	16'-1"	b	14'-10"	b	13'-10"	b
2" x 7" x 0.055" x 0.120"	25'-8"	d	23'-4"	d	21'-8"	d	20'-5"	d	18'-11"	b	17'-7"	b	16'-6"	b
2" x 8" x 0.070" x 0.224"	31'-1"	d	28'-3"	d	26'-2"	d	23'-11"	b	21'-11"	b	20'-4"	b	18'-11"	b
2" x 9" x 0.070" x 0.204"	33'-6"	d	30'-2"	b	26'-11"	b	24'-7"	b	22'-9"	b	21'-3"	b	19'-11"	b
2" x 9" x 0.082" x 0.326"	35'-11"	d	32'-8"	d	30'-4"	d	28'-6"	d	27'-1"	d	25'-11"	d	24'-7"	b
2" x 10" x 0.090" x 0.374"	41'-11"	d	38'-1"	d	35'-4"	d	33'-3"	d	31'-7"	d	30'-3"	d	29'-1"	d

Note:
1. Thicknesses shown are "nominal" industry standard tolerances. No wall thickness shall be less than 0.040".
2. Using screen panel width 'W' select upright length 'H'.
3. Above heights do not include length of knee brace. Add vertical distance from upright to center of brace to beam connection to the above spans for total beam spans.
4. Site specific engineering required for pool enclosures over 30' in mean roof height.
5. Height is to be measured from center of beam and upright connection to fascia or wall connection.
6. Chair rails of 2" x 2" x 0.044" min. and set @ 36" in height are designed to be residential guardrails provided they are attached with min. (3) #10 x 1-1/2" S.M.S. into the screw bosses and do not exceed 8'-0" in span.
7. Max. beam size for 2" x 5" is 2" x 7" x 0.055" x 0.120"
8. Spans may be interpolated.
9. To convert spans to "C" and "D" exposure categories see exposure multipliers and example on page 1-ii.

Table 1.4 110 E Eagle Metal Distributors, Inc. Post / Girt / Chair Rail Spans, Header Spans & Upright Heights for Secondary Screen Wall Frame Members

Aluminum Alloy 6061 T-6

For 3 second wind gust at a velocity of 110 MPH, Exposure "B" or an applied load of 13 # / sq. ft.

A. Sections As Horizontals Fastened To Posts With Clips

Hollow Sections	Tributary Load Width 'W' = Member Spacing													
	3'-6"		4'-0"		4'-6"		5'-0"		5'-6"		6'-0"		6'-8"	
	Allowable Height "H" or Span "L" / bending (b), deflection (d)													
2" x 2" x 0.043"	7'-0"	d	6'-9"	d	6'-5"	d	6'-3"	d	6'-0"	d	5'-10"	b	5'-6"	b
3" x 2" x 0.045"	7'-11"	d	7'-7"	d	7'-3"	d	7'-1"	d	6'-10"	d	6'-8"	d	6'-3"	b
2" x 3" x 0.045"	10'-0"	d	9'-7"	d	9'-2"	d	8'-11"	d	8'-6"	b	8'-1"	b	7'-7"	b
3" x 2" x 0.070"	9'-0"	d	8'-8"	d	8'-3"	d	8'-0"	d	7'-9"	d	7'-7"	d	7'-3"	d
2" x 4" x 0.050"	13'-2"	d	12'-7"	d	11'-11"	b	11'-5"	b	10'-10"	b	10'-3"	b	9'-8"	b
2" x 5" x 0.060"	16'-9"	d	16'-0"	d	15'-4"	d	14'-11"	d	14'-5"	d	14'-0"	d	13'-6"	d

B. Sections As Horizontals Fastened To Posts Through Side Into Screw Bosses

Hollow Sections	Tributary Load Width 'W' = Member Spacing													
	3'-6"		4'-0"		4'-6"		5'-0"		5'-6"		6'-0"		6'-8"	
	Allowable Height "H" or Span "L" / bending (b), deflection (d)													
2" x 2" x 0.043"	8'-10"	b	8'-2"	b	7'-7"	b	7'-3"	b	6'-10"	b	6'-6"	b	6'-1"	b
3" x 2" x 0.045"	10'-1"	b	9'-5"	b	8'-8"	b	8'-3"	b	7'-10"	b	7'-5"	b	7'-0"	b
2" x 3" x 0.045"	12'-4"	b	11'-5"	b	10'-7"	b	10'-1"	b	9'-8"	b	9'-1"	b	8'-8"	b
3" x 2" x 0.070"	12'-1"	d	11'-7"	d	11'-1"	d	10'-9"	d	10'-3"	b	9'-10"	b	9'-4"	b
2" x 4" x 0.050"	15'-7"	b	14'-6"	b	13'-5"	b	12'-9"	b	12'-1"	b	11'-6"	b	10'-10"	b
2" x 5" x 0.060"	21'-0"	b	19'-8"	b	18'-4"	b	17'-7"	b	16'-9"	b	16'-0"	b	15'-3"	b

Note:
1. Thicknesses shown are "nominal" industry standard tolerances. No wall thickness shall be less than 0.040".
2. Using screen panel width 'W' select girt lengths.
3. Site specific engineering required for pool enclosures over 30' in mean roof height.
4. Span/height is to be measured from center of beam and upright connection to fascia or wall connection.
5. Chair rails of 2" x 2" x 0.044" min. and set @ 36" in height are designed to be residential gardrails provided they are attached with min. (3) #10 x 1-1/2" s.m.s. into the screw bosses and do not exceed 8'-0" o.c.
6. Girt spacing shall not exceed 6'-8".
7. Max. beam size for 2" x 5" is 2" x 7" x 0.055" x 0.120"
8. 2" x 4" & 2" x 5" hollow girts shall be connected w/ an internal or external 1-1/2" x 1-1/2" x 0.044" angle.
9. Spans/heights may be interpolated.
10. To convert spans to "C" and "D" exposure categories see exposure multipliers and example on page 1-ii.

Table 1.10 120 E Eagle Metal Distributors, Inc. Allowable Spans for 5" Super Gutter and Self Mating Beam Screened Enclosure One Side/Solid Roof Other Side

Aluminum Alloy 6061 T-6

for Areas in Wind Zones of 110 and 120 M.P.H., Exposure "B" or Less and Latitudes Below 30°-30'-00" North
Uniform Load on Screen = 4 #/SF, Solid Roof = 27.4 #/SF
300# Point Load is Considered over (1) LF of Beam

Single Self-Mating Beams	Tributary Load Width					
	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"	22'-0"
	Allowable Span 'L' / Point Load (P) or Uniform Load (U), bending (b) or deflection (d)						
2" x 6" x 0.050" x 0.120"	15'-4" Ud	15'-2" Ud	14'-11" Ud	14'-9" Ud	14'-6" Ud	14'-4" Ud	14'-2" Ud
2" x 7" x 0.055" x 0.120"	12'-8" Ub	12'-4" Ub	12'-1" Ub	11'-10" Ub	11'-8" Ub	1'-5" Ub	11'-3" Ub
2" x 8" x 0.072" x 0.224"	17'-3" Ub	16'-11" Ub	16'-7" Ub	16'-3" Ub	15'-11" Ub	15'-7" Ub	15'-4" Ub
2" x 9" x 0.072" x 0.204"	17'-9" Ub	17'-4" Ub	17'-0" Ub	16'-8" Ub	16'-4" Ub	16'-1" Ub	15'-9" Ub
2" x 9" x 0.082" x 0.326"	21'-6" Ub	21'-0" Ub	20'-7" Ub	20'-2" Ub	19'-9" Ub	19'-5" Ub	19'-1" Ub
2" x 10" x 0.090" x 0.374"	25'-7" Ub	25'-0" Ub	24'-6" Ub	24'-0" Ub	23'-7" Ub	23'-1" Ub	22'-8" Ub

Note:
1. If the solid panel is greater or less than 10'-0", then the 1/2 the allowable screen roof beam span shall be adjusted by the factor of +/- 2 x 1/2 (the solid roof panel span difference between the actual and 10'-0"). The adjustment to the allowable screen roof panel width is applied as a plus if the solid roof panel is larger than 10'-0" and minus if the solid roof panel is smaller than 10'-0".
2. For span of "L" of beam; use screen panel width "W" from drawing.
3. Load span = 1/2 of screen beam length + 1/2 of solid roof span .
4. Spans may be interpolated.
5. For minimum beam to upright sizes use Table 2.3
6. To convert spans to "C" and "D" exposure categories see exposure multipliers and example on page 1-ii.

Table 1.5.1 120 E Eagle Metal Distributors, Inc. Allowable Spans for Miscellaneous Framing Beams as Supporting Screen Roof Frame Members Both Ends of Beam Attached to Host Structure (Not Axially Loaded)

for Areas with Wind Loads up to 120 M.P.H., Exposure "B" and Latitudes Below 30°-30'-00" North (Jacksonville, FL)
Uniform Load = 4 #/SF, a Point Load of 300 #/SF over (1) linear ft. is also considered
Aluminum Alloy 6061 T-6

Single Single Self-Mating Beams	Tributary Load Width																			
	10'-0"		14'-0"		18'-0"		22'-0"		26'-0"		30'-0"		34'-0"		38'-0"		42'-0"		46'-0"		50'-0"		54'-0"	
	Allowable Span 'L' / Point Load (P) or Uniform Load (U), bending (b), deflection (d)																							
2" x 4" x 0.045 x 0.088"	12'-11"	Pd	12'-11"	Pd	11'-5"	Ub	10'-4"	Ub	9'-6"	Ub	8'-10"	Ub	8'-3"	Ub	7'-10"	Ub	7'-5"	Ub	7'-1"	Ub	6'-10"	Ub	6'-7"	Ub
2" x 5" x 0.050" x 0.116"	15'-9"	Pd	15'-1"	Pb	13'-3"	Ub	12'-0"	Ub	11'-1"	Ub	10'-4"	Ub	9'-8"	Ub	9'-2"	Ub	8'-8"	Ub	8'-4"	Ub	7'-11"	Ub	7'-8"	Ub
2" x 6" x 0.050" x 0.120"	18'-5"	Pd	16'-5"	Ub	14'-5"	Ub	13'-1"	Ub	12'-0"	Ub	11'-2"	Ub	10'-6"	Ub	9'-11"	Ub	9'-6"	Ub	9'-0"	Ub	8'-8"	Ub	8'-4"	Ub
2" x 7" x 0.055" x 0.120"	20'-5"	Pd	17'-3"	Ub	15'-3"	Ub	13'-9"	Ub	12'-8"	Ub	11'-10"	Ub	11'-1"	Ub	10'-6"	Ub	9'-11"	Ub	9'-6"	Ub	9'-2"	Ub	8'-10"	Ub
2" x 8" x 0.070" x 0.224"	25'-4"	Pd	21'-11"	Ub	19'-4"	Ub	17'-8"	Ub	16'-1"	Ub	14'-11"	Ub	14'-1"	Ub	13'-3"	Ub	12'-8"	Ub	12'-1"	Ub	11'-7"	Ub	11'-2"	Ub
2" x 9" x 0.070" x 0.204"	27'-0"	Pd	22'-10"	Ub	20'-2"	Ub	18'-3"	Ub	16'-9"	Ub	15'-7"	Ub	14'-8"	Ub	13'-10"	Ub	13'-2"	Ub	12'-7"	Ub	12'-1"	Ub	11'-8"	Ub
2" x 9" x 0.082" x 0.326"	29'-3"	Pd	27'-5"	Ub	24'-2"	Ub	21'-10"	Ub	20'-1"	Ub	18'-9"	Ub	17'-7"	Ub	16'-8"	Ub	15'-10"	Ub	15'-1"	Ub	14'-6"	Ub	13'-11"	Ub
2" x 10" x 0.090" x 0.374"	34'-2"	Pd	31'-11"	Ub	28'-2"	Ub	25'-6"	Ub	23'-6"	Ub	21'-10"	Ub	20'-6"	Ub	19'-5"	Ub	18'-6"	Ub	17'-8"	Ub	16'-11"	Ub	16'-3"	Ub

Note:
1. It is recommended that the engineer be consulted on any carrier beam that spans more than 50'
2. Span is measured from center of connection to fascia or wall connection.
3. Above spans do not include length of knee brace. Add horizontal distance from upright to center of brace to beam connection to the above spans for total beam spans.
4. Spans may be interpolated.
5. To convert spans to "C" and "D" exposure categories see exposure multipliers and example on page 1-ii.

Table 1.5.2 120 E Eagle Metal Distributors, Inc. Allowable Spans for Miscellaneous Framing Beams as Supporting Screen Roof Frame Members One End of Beam Attached to Host Structure

for Areas with Wind Loads of 110 & 120 M.P.H., Exposure "B" and Latitudes Below 30°-30'-00" North (Jacksonville, FL)
Uniform Load = 4 #/SF, a Point Load of 300 #/SF over (1) linear ft. is also considered
Aluminum Alloy 6061 T-6

Single Single Self-Mating Beams	Tributary Load Width																			
	10'-0"		14'-0"		18'-0"		22'-0"		26'-0"		30'-0"		34'-0"		38'-0"		42'-0"		46'-0"		50'-0"		54'-0"	
	Allowable Span 'L' / Point Load (P) or Uniform Load (U), bending (b), deflection (d)																							
2" x 4" x 0.045 x 0.088"	12'-11"	Pd	12'-11"	Pd	12'-2"	Ub	11'-0"	Ub	10'-2"	Ub	9'-5"	Ub	8'-10"	Ub	8'-5"	Ub	7'-11"	Ub	7'-7"	Ub	7'-4"	Ub	7'-0"	Ub
2" x 5" x 0.050" x 0.116"	15'-9"	Pd	15'-9"	Pd	14'-8"	Ub	13'-4"	Ub	12'-3"	Ub	11'-5"	Ub	10'-8"	Ub	10'-1"	Ub	9'-7"	Ub	9'-2"	Ub	8'-10"	Ub	8'-6"	Ub
2" x 6" x 0.050" x 0.120"	18'-5"	Pd	18'-3"	Ub	16'-1"	Ub	14'-7"	Ub	13'-5"	Ub	12'-6"	Ub	11'-9"	Ub	11'-1"	Ub	10'-7"	Ub	10'-1"	Ub	9'-8"	Ub	9'-4"	Ub
2" x 7" x 0.055" x 0.120"	20'-11"	Pd	19'-10"	Ub	17'-6"	Ub	15'-10"	Ub	14'-7"	Ub	13'-7"	Ub	12'-9"	Ub	12'-1"	Ub	11'-6"	Ub	10'-11"	Ub	10'-6"	Ub	10'-1"	Ub
2" x 8" x 0.070" x 0.224"	25'-4"	Pd	25'-4"	Pd	24'-11"	Ub	22'-7"	Ub	20'-9"	Ub	19'-4"	Ub	18'-2"	Ub	17'-2"	Ub	16'-4"	Ub	15'-8"	Ub	14'-11"	Ub	14'-5"	Ub
2" x 9" x 0.070" x 0.204"	27'-3"	Pd	27'-3"	Pd	25'-9"	Pd	23'-3"	Ub	21'-5"	Ub	19'-11"	Ub	18'-9"	Ub	17'-9"	Ub	16'-10"	Ub	16'-1"	Ub	15'-5"	Ub	14'-10"	Ub
2" x 9" x 0.082" x 0.326"	29'-3"	Pd	29'-3"	Pd	29'-3"	Pd	27'-5"	Ud	25'-11"	Ud	24'-5"	Ub	22'-11"	Ub	21'-9"	Ub	20'-8"	Ub	19'-9"	Ub	18'-11"	Ub	18'-3"	Ub
2" x 10" x 0.090" x 0.374"	34'-2"	Pd	34'-2"	Pd	34'-2"	Pd	31'-11"	Ud	30'-3"	Ud	28'-10"	Ud	27'-8"	Ub	26'-2"	Ub	24'-10"	Ub	23'-9"	Ub	22'-10"	Ub	21'-11"	Ub

Note:
1. It is recommended that the engineer be consulted on any carrier beam that spans more than 50'
2. Span is measured from center of connection to fascia or wall connection.
3. Above spans do not include length of knee brace. Add horizontal distance from upright to center of brace to beam connection to the above spans for total beam spans.
4. Spans may be interpolated.
5. To convert spans to "C" and "D" exposure categories see exposure multipliers and example on page 1-ii.

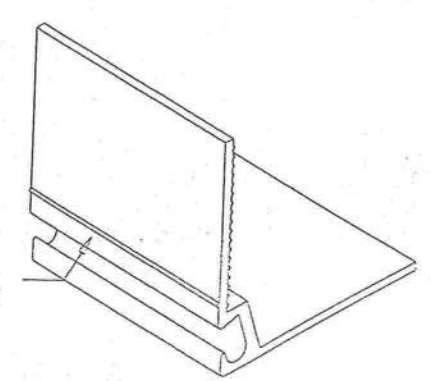
EAGLE 6061 ALLOY IDENTIFIER™ INSTRUCTIONS FOR PERMIT PURPOSES

To: Plans Examiners and Inspectors,

These identification instructions are provided to contractors for permit purposes. The pictures below illustrate our unique "raised" external identification mark (Eagle 6061™) and its location next to the spline groove, to signify our 6061 alloy extrusions. It is ultimately the purchaser's / contractor's responsibility to ensure that the proper alloy is used in conjunction with the engineering selected for construction. We are providing this identification mark to simplify identification when using our 6061 Alloy products.

A separate signed and sealed certification letter from Eagle Metals will be provided once the metal is purchased. This should be displayed on site for review at final inspection.

The inspector should look for the identification mark as specified below to validate the use of 6061 engineering.



EAGLE 6061 I.D. DIE MARK

1-8-2008

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ALUMINUM STRUCTURES DESIGN MANUAL
SCREEN ENCLOSURES
6061-T6 Alloy Frame Members - 110 MPH Zone
2004 FBC W/ 2006 SUPPLEMENTS
2006 EDITION

Lawrence E. Bennett, P.E. FL # 16644
CIVIL & STRUCTURAL ENGINEERING
P.O. Box 214368, South Daytona, Fl 32121
Telephone #: (386) 767-4774 Fax #: (386) 767-6556
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SHEET 16A-110 OF 18

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IF USING THESE EAGLE 6061 TABLES, PLEASE REFER TO INSTRUCTIONS ON IDENTIFICATION AND CERTIFICATION OF EAGLE METALS 6061 ALLOY.

Table 1.6 Minimum Upright Sizes and Number of Screws for Connection of Roof Beams To Wall Uprights or Beam Splicing

Beam/Upright or Post	Upright or Post/Beam	Minimum Purlin, Girt & Knee Brace Size	Minimum Number of Screws*			Beam Stitching Screw at 24" OC
			#8 x ½"	#10 x ½"	#12 x ½"	
2 x 4 SMB	2 x 3 SMB or H	2" x 2" x 0.044"	8	6	4	#10
2 x 5 SMB	2 x 3 SMB or H	2" x 2" x 0.044"	8	6	4	#8
2 x 6 SMB	2 x 3 SMB or H	2" x 2" x 0.044"	10	8	6	#10
2 x 7 SMB	2 x 4 SMB or H	2" x 3" x 0.044"	14	12	10	#12
2 x 8 SMB	2 x 5 SMB or H	2" x 3" x 0.044"	16	14	12	#14
2 x 9 SMB	2 x 6 SMB	2" x 3" x 0.045"	18	16	14	#14**
2 x 9 SMB *	2 x 7 SMB	2" x 4" x 0.050"	20	18	16	#14**
2 x 10 SMB	2 x 8 SMB	2" x 5" x 0.050"	20	18	16	#14**

Screw Size	Minimum Distance and Spacing of Screws		Gusset Plate Thickness	
	Edge To Center	Center To Center	Beam Size	Thickness
#8	5/16"	5/8"	2" x 7" x 0.055" x 0.120"	0.063"
#10	3/8"	3/4"	2" x 8" x 0.072" x 0.224"	0.125"
#12	1/2"	1"	2" x 9" x 0.072" x 0.224"	0.125"
#14 or 1/4"	3/4"	1-1/2"	2" x 9" x 0.082" x 0.306"	0.190"
5/16"	7/8"	1-3/4"	2" x 10" x 0.092" x 0.369"	0.250"
3/8"	1"	2"		

* 0.082" wall thickness, 0.310" flange thickness
** (1) Stitching screw at 16" O.C. max.

Connection Example:
2" x 7" beam & 2" x 4" at beam & gusset plate, (14) #8 x 1/2" sms & upright & gusset plate
(14) #8 x 1/2" sms ea. side of beam & upright.

Note:
1. Connection of 2" x 6" to 2" x 4" shall use a full lap cut or 1/16" gusset plate.
2. For beam splice connections the number of screws shown is the total for each splice with 1/2 the screws on each side of the cut.
3. The number of screws is based on the maximum allowable moment of the beam.
4. The number of deck anchors is based on RAWL R Tapper allowable load data for 2,500 psi concrete and / or equal anchors may be used. The number shown is the total use 1/2 per side.
5. Hollow splice connections can be made provided the connection is approved by the engineer.
6. If a larger than minimum upright is used the number of screws is the same for each splice with 1/2 the screws on each side of the cut.
7. The side wall upright shall have a minimum beam size as shown above, ie., a 2" x 4" upright shall have a 2" x 3" beam.
8. For minimum girt size read upright size as a beam and purlin size is minimum girt size. (i.e. 2" x 9" x 0.072" x 0.224" s.m.b. w/ 2" x 6" x 0.050 x 0.120" s.m.b. upright requires a 2" x 3" x 0.045" girt / chair rail.)
9. All connection shall use a full lap cut.

Table 1.7 Minimum Size Screen Enclosure Knee Braces and Anchoring Required
Aluminum 6063 T-6

Brace Length*	Extrusion	Anchoring System
0' - 2'-0"	2" x 2" x 0.044"	2" H-Channel With (3) #10 x 1/2" each leg of channel
To 3'-0"	2" x 3" x 0.045"	2" H-Channel With (3) #10 x 1/2" each leg of channel
Up to 6'-0"	2" x 4" x 0.044" x 0.100"	2" H-Channel With (4) #10 x 1/2" each leg of channel

* Knee brace length shall be the horizontal and vertical length @ a 45° angle from the center of the connection to the face of the beam or upright.

Note:
1. For required knee braces greater than 4'-6" contact engineer for specifications and details.
2. Cantilever beam detail shown on page 1-40 shall be used for transom wall to host structure attachment when knee brace length exceeds 6'-0".

Table 1.8 K-Bracing Fastening Schedule

Maximum Wall Width =	Number of #10 x 3/4" S.M.S. Required				
	Corner Post @ Top	Diagonals (K) per End	Intermediate Post @ Chair Rail	Corner Post @ Bottom	Plate to Sole Plate
20'-0"	2	2	4	2	2
30'-0"	2	2	4	2	2
40'-0"	3	4	6	2	2
50'-0"	4	5	8	3	3
60'-0"	6	7	12	3	3

* Use screw sizes specified in the table below.
Use front wall width when determining number of s.m.s. for the side wall K-bracing.
Use side wall width when determining number of s.m.s. for the front and / or back wall K-bracing.

Wind Zone	Screw Size
90 MPH	#10
100 MPH	#10
110 MPH	#10
120 MPH	#10
130 MPH	#12
140-1&2 MPH	#14
150 MPH	#14

Table 1.11 Maximum Overhang for Rafter / Truss Tails when Connected to Screen Roof

20' Max. Enclosure Span		Rafter / Truss Tail #2 Span / bending (b) or deflection (d)									
Wind Zone ("B" Exp.)	Wind Pressure (#/SF)	2x4		2x6		2x8		2x10		2x12	
100-110	4	2'-2"	b	5'-4"	b	9'-3"	b	15'-0"	b	22'-3"	b
120	4	2'-2"	b	5'-4"	b	9'-3"	b	15'-0"	b	22'-3"	b
123	4.3	2'-0"	b	4'-11"	b	8'-7"	b	13'-11"	b	20'-8"	b
130	5	1'-9"	b	4'-3"	b	7'-5"	b	12'-0"	b	17'-10"	b
140	6	1'-5"	b	3'-7"	b	6'-2"	b	10'-0"	b	14'-10"	b
150	7	1'-3"	b	3'-0"	b	5'-3"	b	8'-7"	b	12'-9"	b
30' Max. Enclosure Span		Rafter / Truss Tail #2 Span / bending (b) or deflection (d)									
Wind Zone ("B" Exp.)	Wind Pressure (#/SF)	2x4		2x6		2x8		2x10		2x12	
100-110	4	1'-5"	b	3'-7"	b	6'-2"	b	10'-0"	b	14'-10"	b
120	4	1'-5"	b	3'-7"	b	6'-2"	b	10'-0"	b	14'-10"	b
123	4.3	1'-4"	b	3'-4"	b	5'-9"	b	9'-4"	b	13'-10"	b
130	5	1'-2"	b	2'-10"	b	4'-11"	b	8'-0"	b	11'-10"	b
140	6	0'-11"	b	2'-4"	b	4'-1"	b	6'-8"	b	9'-11"	b
150	7	0'-10"	b	2'-0"	b	3'-6"	b	5'-9"	b	8'-6"	b
40' Max. Enclosure Span		Rafter / Truss Tail #2 Span / bending (b) or deflection (d)									
Wind Zone ("B" Exp.)	Wind Pressure (#/SF)	2x4		2x6		2x8		2x10		2x12	
100-110	4	1'-1"	b	2'-8"	b	4'-7"	b	7'-6"	b	11'-1"	b
120	4	1'-1"	b	2'-8"	b	4'-7"	b	7'-6"	b	11'-1"	b
123	4.3	1'-0"	b	2'-6"	b	4'-4"	b	6'-11"	b	10'-4"	b
130	5	0'-10"	b	2'-2"	b	3'-8"	b	6'-0"	b	8'-11"	b
140	6	0'-9"	b	1'-9"	b	3'-1"	b	5'-0"	b	7'-5"	b
150	7	0'-7"	b	1'-6"	b	2'-8"	b	4'-4"	b	6'-4"	b

Note:
1. For overhangs with spans that exceed those listed above site specific engineering is required.
2. If truss bottom cord extends more than 24" over the wall site specific engineering is required.
3. To convert from exposure "B" spans to "C" or "D" exposure spans see multipliers and example on page 1ii.

Example:
For a pool inclosure with 30' max. beam span, in a 123 MPH wind zone, "B" exposure. For 2 x 6 rafter / truss the max overhand from the wall of the host structure to the sub-fascia is 3'-4".
To convert from exposure "B" spans to "C" or "D" exposure spans see multipliers and example on page 1ii.

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SCREEN ENCLOSURES
SECTION 1 TABLES
2004 FBC W/ 2006 SUPPLEMENTS
2006 EDITION

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